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THE ADDRESS IN SURGERY.

BY

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GENTLEMEN,—To deliver the Address in Surgery at the annual meeting of your Association is a function bearing much honour, but at the same time beset with much difficulty. I have been greatly puzzled how to proceed. On what topics? In what strain? On the whole, I have judged it well that my remarks should be of a general character, and of a tone calculated to comfort and cheer us on in our arduous but noble calling.

Of course, I do not stand here to represent a class of separates from medicine. On the contrary, we surgeons hold ourselves to be part and parcel of the general body—a limb of the common trunk, unseparated and inseparable.

Yet we and our vocation have our distinctive characters. And not the least of these is the happy fact that, comparatively, little of the uncertain attaches to our work. *Quod in medicinâ certum et efficax*, was a proud definition of surgery long ago; and its pretentiousness was not wholly unfounded even then. Grant but the *certum*, the *efficax* should follow; and that the *certum* is more within *our* reach than that of our medical brethren, is very plain. Our means of diagnosis are more direct; our field of work is more amenable to sight and touch; our remedies, for the most part, are very definite in their operation; and, above all, we have comparatively much greater power of placing the diseased part in a condition of repose, so as to profit to the full by the curative means which are suitably applied.

The due realisation of this seems to explain much of the progress which surgery has of late years made, more especially in the treatment of bones and joints. The physician has a heart, or lung, or brain, brought under his care, affected inflammatorily. He cannot place it in absolute rest. Its work must go on, more or less. And this continued working of the impaired organ must necessarily go far to countervail the remedial action of the antiphlogistics employed. But, with us, here is a joint similarly affected. We stop its function instantly and absolutely. Splint, or pillow, or bandage, at once arrest all motion; complete repose is effected and maintained; and, in consequence, the treatment is both more speedy and more sure. Nay, it is easier too; less activity of treatment is required, and the local disturbance can be quieted and arranged with less cost or hazard to the system at large. When a strong wind is blowing, a street-fire is with difficulty put out; much water and much pumping are needed, with much tramping of the fire-men here and there; and when all is at length subdued, the house is found sorely damaged, while the neighbouring tenements, too, have suffered more or less untowardly. Whereas, in a dead calm, the flames are extinguished both more speedily and more easily; and the mischief done, as regards all concerned, is comparatively small.

It is pleasant for us, sitting here to-day in brotherly and friendly intercourse, to think of the many joints and limbs we have ourselves preserved, to symmetry as well as usefulness, which, not very long ago, would have had no chance of escape from the knife and saw; and the thankful complacency will not fail to enlarge itself, as we carry back our thoughts more widely and remotely, conjuring up the many thousand similar instances wherein the conservative power of scientific surgery has of late years proved itself gloriously triumphant. What and whom have we to thank for this? There need be little hesitation in answering the question. To the principle of maintaining *rest* in the part, during the progress of cure, the main credit is to be awarded. And with the successful and scientific application of this principle, more than one distinguished name might be here associated.

There is a like quality of benignant amelioration spreading over the whole range of surgery; and it surely is a token for good. In ancient times, the penal laws of our country were bloody. The hangman's noose knew little rest; and but a slight offence against social morality sufficed to consign many a hapless wretch to the gallows. Sometimes, no doubt, good was done, though only by accident; as when a guilty murderer escaped through lack of evidence, and having been let loose upon society, was caught again, and executed, through conviction for some miserable theft or petty larceny. The country groaned under the reeking scaffold, and did not mend. By and by, however, things took a turn. Christianity and civilisation advanced; and as they spread their healing and humanising influences all around, justice took off from the bent of Draco, and leaned forwards on that better code, whose Great Source finds judgment to be as a strange work, and who delighteth in mercy. And now we live in a better day. Blood still demands blood, no doubt, as it ever will; but not one crime only formerly expiated by death, but all minor offences, not affecting life, are now absolved from that last and heaviest doom. Even so it is with *our* laws. Old surgery was very bloody; its hands were reeking and red; and full often did the human frame wince sorely under cruel dismemberment. But happily we now look upon this state of things only as recorded in the past. Scientific research and skilful observation, with sound reasoning over all, have spread abroad; and the result has been hæmostatic. Not one class of diseases only, as of joints, but *all*, have been found amenable to gentler means of cure. The plague of the knife has been stayed, and its function limited to those exceptional cases only—the great and otherwise incurable offences against the laws of health—in which nothing short of extreme measures can prove availing. Patients and practitioners alike rejoice in the auspicious change; and surgery now, like mercy, is

> "twice bless'd:
> It blesseth him that gives, and him that takes."

In one respect, however, our knife is busier than before; namely, in removing diseased portions of a part in order to preserve the whole. Operative surgery, mutilating or destructive, we desire to curb; and, as our art truly advances, this department of it will be bound within still narrowing limits; but that operative surgery, which is conservative, is widening its field of work, and with the happiest results. Take joints, for an example. As already observed, many diseased ones are now-a-days healed quite, without the use of the knife at all, that formerly would have been at once amputated. Herein surgery curative has superseded surgery operative. But there are many other diseased joints which we cannot cure thus simply, and yet which we must not summarily dispose of by amputation. The limb is not cut off, but the diseased parts of it are cut out; and, nature having in due time provided a very efficient substitute for what is thus taken away, the limb (retained in almost all its usefulness, and in much of its looks too) dreams not of parting company with its fellow; but, after a while, gets into its accustomed play again, little the worse for having for a time been "out of gear". This is good work; and surgery is proud of it this day.

Here I might be tempted to indulge in specifying some names of those distinguished among you. But from this, for obvious reasons, I must refrain. Men, good and true, in numbers, are busy in the work—the great and good work—of advancing true surgery. Many before me now are not unknown in this relation; and long years hence will still be known and honoured as benefactors of their country and their kind. And let me say that, to my apprehension, one of the most hopeful

signs of our times is, the vast amount of talent, energy, and enthusiasm, that pervades the *youth* of our profession. I do not say, because I do not think, that they are striving to push us ancients from our stools; but of this I am sure, that they are well resolved to be not only on the same platform with us, so far as knowledge and acquirements are concerned, but also to push on—each one for himself, and each one for us all—in the open ground of sound reform and fresh discovery.

An important consideration might well detain us here. Is there any plan or method, of a general and comprehensive kind, whereby such labours might be conducted so as to command the greatest possible success? It were vain to expect any such uniform combination as may take place among workmen, however many and various, who are guided and controlled by one master power or authority. But surely, in our free republic, there might and ought to be more system and regularity in working than there is. Much invaluable force, as well as time, is wasted, which otherwise might have led to great results. And may not such an Association as this legitimately aspire to some correction of the evil? Might you not arrive at a satisfactory conclusion as to what are the undeniably fixed points of surgical practice and pathology; rendering it as unnecessary as unwise for the "coming men" to retread the beaten tracks there? And might you not then take it upon you, from these fixed things as starting points, to indicate the directions in which the progressive efforts ought mainly to proceed?

Such *radii* of progress being given, the right division of labour therein might safely be left for the labourers themselves to determine. And these, working in groups (not solitarily and singly, for "in the multitude of counsellors there is safety") while starting from a common centre, and separating for a time, may well hope to meet again in a common terminus—the advancement of science, the mitigation of disease, the well-being of man, the glory of God.

Arrange as you will, it may be said, there will be jostling. Not necessarily. The lines may converge and meet, but need not cross; and as they meet, the contact need be none other than friendly; proving, indeed, the source of mutual help and encouragement. In such a crowded fleet as ours, there is no doubt some risk of confusion and entanglement, more especially if it come on to *blow*. But let each several ship sail *straight* in all weathers, keeping its defined course; let the compass be true, and the steering steady; there will be no collision. Or if, notwithstanding all our care, there be now and then a fouling, yet with good temper and skilful seamanship, we may boom off and make all clear again, the golden rule working thereto with an almost mathematical exactitude. "Let A. do to B., as he would have B. to do to him, and the product will give the rule of conduct required."

But in surgery, as in medicine, and perhaps more specially, we have to guard against a common error in believing that progress and amendment are necessarily connected with the discovery of what is striking and new. The flash of novelty is one thing. The steady light of progress is quite another thing. The foremost man is not he who jerks himself into the front, by some royal road, or short cut; but he who has come by the old ways, and uses these as his basis of operations in advance. "Stand ye in the ways and see, and ask for the old paths, where is the good way, and walk therein."

I speak in the hearing of many well acquainted with the sports of the field. They know that to "*lift*" the hounds, and make a "cast" is only a *dernier ressort*, a shift when other means fail to pick up a lost scent. Far better to run steadily on without a break, even though the pace prove less swift; the quarry is more safe in the end. In like manner, let our progress be continuous, our running constant and compact. Let the good hounds to the front; let their fellows know their "tongue," and honour it; and let the huntsman's lash be freely bestowed on each babbling puppy that, separating unduly from the rest, yelps on a false scent—a captivating novelty to him, but to the others "a mockery, a delusion, and a snare."

In Athens of old, an undue itch for novelty had become a national passion and characteristic. "They spent their time in nothing else, but either to tell or to hear some new thing—the newest of the new—not καινον only, but καινοτερον. They had, in truth, degenerated into a nation of gossips. And it behoves us to remember that there may be danger from a like cause in our own day. There may be scientific as well as social gossip; not furthering, but greatly frustrating the advancement of true science. To be safe, we must occupy a space between two extremes: not blind *to* innovation, on the one hand; not blinded *by* innovation, on the other. The rule of conduct is plain and infallible; "Prove all things: hold fast that which is good."

On one or two points of recent interest, let me speak briefly. Perhaps the most striking novelty in practical surgery of the present day, is *the painless operation*. All honour and thanks to them who have introduced the principle, and improved the practice!

In the case of children, the anæsthetic use of chloroform is almost all that could be desired. Its effect is both rapid and easy; it annihilates an agony which otherwise would have proved a sad penance to both surgeon and patient; and we are seldom troubled with anxiety or alarm in its working. Formerly, one of the most painful tasks connected with our art was the diagnosis of injuries and performance of operations on patients of tender years; and sometimes the sympathies of our common nature may have tempted to a hasty and imperfect execution of the task, out of mere compassion to the writhing sufferer. Now, the utmost deliberation and care are in all cases within our reach; the patient passionless; and the risk of casualty notoriously small.

In the case of *adults*, I desire to express my own conviction that complete anæsthesia by inhalation ought to be had recourse to only in obedience to the requirement of stern necessity. My belief is unqualified in the law of tolerance here. If the circumstances are such as to demand the remedial agent, that may be readily administered; in the expectation that the system will not suffer permanent damage in its use, and that the ultimate result will be in no respect untoward. But if the circumstances of the case be not so imperative, then I have no confidence in the anæsthetic, and will fear a casualty at every turn. This is no fancy or superstition. It is the working out of a law of nature, which permeates her whole range. "*Quod necessarium, tutum.*" The therapeutic objects of the anæsthetic agent I take to be—the abrogation of intense and exhausting pain, the diminution of shock, and the relaxation of muscular action—the last, perhaps, not the least important. In any formidable surgical procedure, in which the attainment of one or all of these objects seems highly expedient, if not absolutely necessary, as in amputations, lithotomy, dislocations, hernia, etc., I would not hesitate to anæsthetise. But in any minor procedure, in which pain or risk of shock is inconsiderable, or in which muscular relaxation and absolute impassivity are not required, I would be slow to humour the patient's fancy, or quiet his unnecessary alarm, at the expense of running counter to the law of tolerance, and so incurring risk of serious casualty.

It becomes me to take this opportunity of stating than when chloroform was first brought into use here, I was a great enthusiast in its praise. I esteemed it to be as safe and manageable, as it was beneficial; and thought that it could hardly be used too often or too freely. I committed these thoughts to written words; and, as I wrote, my pen warmed with an honest enthusiasm. But subsequent events have chastened and subdued my tone; and my present "surgical experience of chloroform" amounts to this—never to withhold its use, *when* that use seems to be imperatively required; and never to sanction its use, *unless* this seems to be absolutely demanded; always conducting its administration with the utmost prudence and caution, so as to avoid those terrible results which error or excess, even under the protection of an existing tolerance, may not fail to produce, and from which, as experience has too fully shown, even faultless administration is not altogether free. Into the question as to whether ether or chloroform be the safer anæsthetic, I do not enter. Both are imperfect; and ere long an agent superior to both may probably be discovered. Meanwhile, let us be thankful for what we have, using it with wise economy and care; and let us mark off an advance in *this* direction as one of the true *radii* formerly alluded to as suitable and safe for the surgical pioneer.

Meanwhile, also, let us practise when we can, and promote the further improvement of those means of *local anæsthesia*, which obviously, if successful in deadening sensation of the part, must thereby do all that we desire, so far as mere anæsthesia is concerned; at the same time relieving us from anxiety and apprehension through involvement of the general system. Those who are engaged in this enterprise, are entitled to our highest esteem; and we heartily wish them success.

The modern method of curing external idiopathic aneurism by other means than ligature of the artery, I cannot but regard as a movement in the right direction. The operation of the ligature, no doubt, has been simplified and improved by freeing the incision from all tear and bruise; by isolating the arterial coats thoroughly, and only at the point of deligation; and by

carefully avoiding all injury to the vein, as well as to every other contiguous texture. But, notwithstanding, the difficulty of having to do with unsound arterial tissue still remains, and ever must remain. The fact of the aneurism's existence renders escape from that untoward circumstance impossible; and therefore, do what we will in skill and care, such direct interference with the vessel's coats as knife and ligature imply, cannot be altogether divested of very serious hazard. The authentic records of surgery, on the other hand, now afford indisputable proof that pressure may be so used as to cure the aneurism, without causing any injury to either the arterial or venous tissues. And, under such circumstances, the conclusion seems inevitable, that we shall assume a very serious responsibility if, in cases suitable, we refuse to practise the simpler, safer, and more scientific means; all the more as, should the attempt fail, the way is still left open to treatment by deligation, on at least as favourable terms as if the milder method had not been previously employed.

To the *microscope* surgery is neither unindebted nor ungrateful.

It is a great boon to be able to *prevent*, through simple therapeutic means, that which our art cannot *cure*, save by formidable operation. It is a brave thing, doubtless, for a dexterous surgeon to cut a man for stone successfully; but it is a better thing that he should timeously detect the tendency to that stone's formation, and by mere hygienic means render that formation abortive. We thank the microscope for valuable help in that direction, and for much else beside. But at the same time we ask it, in friendly tones, to have a care. For example, it is pleasantly exercising itself in the region of tumours, and has therein added many facts, interesting and useful, to those already known. But when it comes to tell us that there is no real difference between malignant and non-malignant tumours; that the pathology of exudation in corneitis, in pulpy synovial disease, and in carcinoma, is the same; that the wart on a boy's hand, and the most foul epithelial cancer of the tongue, are clearly and truly, because histologically, allied,—we respectfully request it to recast and reconsider its opinion. As practical men, we detect, if not a fallacy, at least an imperfection in the result; the report we hold to be premature; the inquiry must go on, content to work yet further in advance, and to wait, it may be some time, ere any safe or true practical conclusions can be attained. We do not blame, we do not distrust histology; but we venture to put forth a friendly caution to some of its cultivators, in favour of greater care, less haste, and more speed.

In *the progress of pathology*, too, we place high confidence; and with good cause. Much of the true advance of modern surgery rests on the basis of this science. But, again, we are not prepared to receive all its dicta—or rather, all the dicta of all its cultivators—with implicit and submissive belief. You, as well as I, I doubt not, have a wholesome dread of acutely secreted pus—genuine pus; *outside* of a granulating surface, the most bland and protective of substances; but, *inside* of any living structure, and cooped up there, productive of inevitable loss of substance, more or less, through vital softening and disintegration of the tissues with which it is in contact—progressive in its course, and if not absolutely, yet comparatively non-absorbable. Now, when we are told by abstract pathology that suppuration is the natural mode of resolution to an inflamed part; that plastic exudation liquefies into pus, in order to be absorbed; and that true antiphlogistic treatment, accordingly, ought not to be directed to repress, but rather to favour the formation of this fluid,—we find our practical knowledge and convictions greatly interfered with, and cannot but conclude that there must be some error in the doctrine. That error seems to be simply this—confounding one thing with another. Plastic exudation must liquefy somehow, in order to be absorbed and disappear; otherwise it remains, and becomes more or less thoroughly organised. Liquefied for absorption, it is an inflammatory fluid, doubtless; but it is not pus. One prominent practical characteristic of acutely formed pus, in an interior, is its comparative non-absorbability, and its connexion with the destruction of tissue; whereas the characteristic of this other fluid is the very opposite—proneness to become absorbed, with no tendency to injury of tissue. The one fluid is the result of a higher, the other of a lower grade of the inflammatory process. Practically, they are intensely different; pathologically, they cannot be the same. The one, as a general rule, refuses to be absorbed, and bores its way determinedly to either a cutaneous or a mucous outlet, causing more or less pain and loss of structure thereby; the other is removed, more or less rapidly, by absorption, with little or no pain, and having the structure comparatively entire. The one we ordinarily promote; the other we oppose, save when destruction of the texture is desired. The phraseology of the pathologist, therefore, must be recast, who would identify the two fluids, and thus lead to serious practical error and mishap.

The pure physician, whose mind is mainly engrossed with puriform exudations from mucous surfaces, and relief of symptoms thereby, may be pardoned for a weakness in favour of such fluids; but we surgeons, who have so often to deal with acute suppuration in interiors—in glands, under fasciæ, in joints, and in bones—and who are daily witnesses to the sad ravages which pus commits there, cannot afford to entertain any such mild opinions. We must ever regard it practically as a most dangerous fluid, under such circumstances; and our treatment must be directed to prevent its formation in the first instance, to secure its timely evacuation in the second.

Again, and in connexion with this: in antiphlogistic therapeutics, while we thankfully acknowledge a happy change in favour of milder and less exhaustive means than those formerly most prized, we must not at once leap to the conclusion that abstraction of blood, even freely, may not still be required, if we would save structure, protect function, and so prolong life and usefulness. The knife, I have already said, is not in such merry play as was its wont, shedding blood largely in its mutilations; and the vocation of the lancet, too, is greatly circumscribed. With very many here, I dare to say, this formidable little weapon has grown well-nigh rusty in its scabbard, and only on rare occasions figures as the agent of phlebotomy. But yet there is, with us, most certainly a limit to that reform. Formal venesection, in surgery and physic alike, is comparatively now rare; and rightly so. But while, in the experience of the physician, idiopathic pneumonial and cognate ailments yield on every hand, and that most readily, to curative means into whose composition abstraction of blood does not enter, it behoves *us* to remember that ofttimes the traumatic inflammations of internal organs, occurring suddenly in otherwise strong and healthy subjects, will not yield satisfactorily, if at all, to anything short of sanguineous depletion. Take but one example. A man has sustained severe concussion of the brain, and excessive reaction has fairly set in. His pulse is hard and quick, his skin hot, his eye bloodshot, his cheek flushed; he is muttering incoherently, tossing his head from side to side, and moaning as he ever and anon lifts his hand to the seat of pain. Treat that man in any other way than with loss of blood, and you peril both his intellect and his life. Experience tells us that, even in the present day, such a morbid state demands the use of this special remedy; and that, in consequence, a tolerance of it exists. Bleed him; bleed him freely; bleed him once and again, if need be; and you need not fear the result. With skilful combination of other therapeutic means, you will obtain a cure, which, without loss of blood, you could not hope for.

A change in the type of disease, and an advanced state of pathology and therapeutics, have combined to render the frequent and profuse abstractions of blood, which obtained aforetime, both unnecessary and unsafe, more especially in medical practice. But, notwithstanding, we, as surgeons, must be content to know that antiphlogistic loss of blood is far from being obsolete, if we would discharge the duties of our particular department wisely and well.

All are agreed that, in the advanced stage of inflammation, loss of blood is of less than no avail. When we bleed, it must be while exudation is yet recent and resolvable, or even anterior to its deposit, and with a view to its prevention. There is a time for everything under the sun. *That* is the time for antiphlogistic loss of blood. And, whatever the physician may do, the surgeon cannot forego his right, or neglect his duty, to wield that implement of cure, when experience shuts him up to the conviction that its use is both necessary and safe.

Surgery cannot always afford to trust in general treatment alone, or in the leisurely operation of internal remedies. Her stroke must often be sudden and direct—by hand, or knife, or lancet; this not superseding, but preceding or accompanying, the other and less cogent means. Much local treatment, accordingly, is peculiar to our art; and we must never forget that the fact is so. But, at the same time, let us as carefully beware of being tempted, by custom or otherwise, to cling too exclusively to local means, when science and common sense alike dictate an opposite procedure.

It seems to me, in all humility, that we have been approaching error in this way, for some time back, in regard to the cure of cancerous disease. The cry has been, "What to the part?

what to the part?" "Are not escharotics preferable to the knife? and, if so, which is the best escharotic?" And so blind has the following been, that the entire profession has almost blundered into the false position, voluntarily assumed by the quack, of identifying "a cure for cancer" with that which is successful only in removing, for a time, the local manifestation of the disease. I cannot but think that there has been a working at the wrong end here—nibbling at the branch, instead of striking at the root of the evil. The physician does not dream of curing gout, whether chronic or acute, by epithems on the part, however strong or various these may be: he knows that he must act upon the entire system. The surgeon, too, in all his skilful handling of bones and joints, knows that, though local applications may soothe or heal a scrofulous sore for a time, yet that with these alone he can never cure the scrofula. And we must not forget the like fact in regard to malignant disease. To me it seems in a great measure immaterial what means of removal be applied to the local affection, provided the removal be thorough and exact. Let this man prefer the knife, this other the caustic; or rather, let us use knife and caustic alternately, as circumstances may seem to require. But surely the *radius* on which the true surgical pioneer should proceed is not the accumulation of knives and caustics, or cunning combinations of these, *so much as* the discovery of what means will best avail to remove that pestilent *dyscrasia*, that sad deterioration of the circulating fluids, on which the essence of all cancerous disease depends, and without the effectual removal of which no permanency or perfection of cure can ever be obtained. Tell us of a remedy, or remedies, acting on the general frame, and we shall be prepared to listen anxiously and attentively in this matter; but so long as you amuse us with mere tampering with the local outburst of the disease, we have little heart to give even a hearing.

At the same time, let me not be misunderstood. Let local treatment be perfected and improved, by all means, as an adjuvant to the other: only let it not take such a foremost place in our thoughts and actions as to overshadow the other, far less exclude it quite. Nay, pending the other's progress—which yet we sigh and long for with all our hearts, and work for with all our might and main—let us worthily use our local means, as all we have at present wherewith to protect and palliate what we may not cure. By skilful use of the knife or caustic, many a cancer may be taken away in all its visible dimensions; the disease may not return in a tangible and outward form for years; and the patient may even pass on to the grave, apparently under the pressure of some other morbid change than that of cancer. So long as such results as these come even but occasionally within reach of the knife or caustic, let us not hesitate to use the knife and caustic, with such cautions and limitations as experience has plainly enforced. Nay, whenever there is a doubt, let us give the patient the benefit of that doubt. "When in doubt, fight," is the rule of the army; and a like canon may not be inapplicable, in some degree, in our surgical battle with malignant disease. With certainty of failure, he is a fool who operates—hot-headed and unwise; but, with a chance of success, and the patient intelligently assuming it, he is no true man who refuses.

We trust the time is for ever gone by, when surgeons shall be found weighing their own reputation in one hand, with the patient's life in the other. Suppose a poor man labouring under some sore disease, for which there is a chance of cure by a bold and hazardous operation. It may be done; but the chance of success is slight. Fully aware of this, he seeks the surgeon, entrusting his destiny in his hands, with confidence, at least, if not in hope. Is selfishness to ponder this matter coldly, and after due deliberation shake the head and say—"It may not be; the risk is too great for *me* as well as *you*; my fame might suffer loss"? Nay—"Stand by," says honest manhood, "I have a reputation, too; hard earned and highly prized; but in circumstances like these I will not place it in the balance." The true surgeon sees but one object here—duty; and that he faithfully performs, fearless of results.

We have each our personal interest to protect and advance, no doubt; and most important and dutiful it is that we should do so, *even in a pecuniary sense*. Not only is the labourer worthy of his hire; the hire must be such as may induce competent labourers to enter upon the field. Let down the status of the surgeon, as regards emolument and social position, and the result ere long must be disastrous not only to surgery, but through surgery to humanity at large. To be safe for all, the platform of our profession must be not only broad but high.

Our *good name*, too, we instinctively cherish. Gold will neither buy nor bring it; gold will not make or mend it; but the golden rule of doing to others as we would be done by, will always prove its safest guardian and surest guarantee.

As dear to us as our own reputation is that of *our profession*. "*Civis Romanus sum!*" said the ancient Roman. And as he spoke, a twin thought rose in his proud heart. As a Roman citizen, he had protection and respect in all the world; injury to him was insult to Rome, and as such would be avenged. But, besides, he had the name and character of the Roman to maintain; disgrace through him would bring dishonour to his country; and haughty Rome would droop her head in shame for the unworthiness of her son. And so with us. "*Chirurgus sum!*" We are of an honourable and honoured profession; it imparts to us both privilege and duty; and all its interests, and all its honour we have sworn to maintain. The fulfilling of that duty needs energy and despatch. Years are passing swiftly by; and opportunity is only now. Soon our respective courses shall be run; and the time may not be far from any here, when the right hand must forget its cunning. Come that hour when it may, let us so use our profession now, that when we are called upon to lay it aside, it shall be with its honour untarnished, its usefulness unimpaired—a garment none the worse, but rather the better for our wearing!

The only way to fulfil these indications is, as already stated, by fearless and uncompromising discharge of duty; holding every other consideration subservient to the requirements of the golden rule, and so faithfully discharging our part in the great mission of healing. Nay, duty is too cold a term. It must be warmed into love. By that our labour, while it is sustained, will be elevated and ennobled; and in all our trials and disappointments we shall be cheered on by the knowledge that our motive power is true—that in the vocation to which we have been called we seek to fulfil the whole law of God—honour to Him, and love to our fellow man; love first and paramount; not love to man alone; but love supreme to him who is both man and God; remembering that when the account of our stewardship shall be given in hereafter, no good deed will pass current there, unless He say "ye have done it unto *Me*."

Such, gentlemen, as you well know, are the noble aspirations of our profession. In fulfilling them, its members must be ready for self-denial oft, and, if need be, self-sacrifice too. And is not the world possessed of ample proof that there are many noble men among you ready to discharge duty in love, at every risk of cost and danger? I take but two examples:—

On the morning of September 23rd, four years ago, as our troops marched on from the hard-fought field of Alma, a grey mass was left on the plain, settled down as if without life or motion. Now and then, we were told, an arm might be seen waved aloft; or a man raised himself for a moment, looked round, and then lay down again. Seven hundred and fifty wounded Russians are lying there. Nearly sixty long hours have they passed in agony on the ground; and now, with but little hope of help or succour more, we must leave them as they lie. Their wounds have been bound and dressed; and, alike unable to take them with us, or to send them away, we must depart. Not all, however. They will not be alone. A British surgeon remains to give them help. Thomson, of the 44th, is the allotted man; and he blenches not from his painful and desolate duty. He is told that his mission will protect him, in case the Cossacks come; he is to hoist a flag of truce should the Russians appear; and then, provided with some rum, biscuit, and salt meat, he is left alone with his charge.

Days and nights this brave man faithfully performed his duty; in danger from the frenzied men around; in danger from the Cossacks; in danger from the pestilence that now stalked abroad. He soothed the pained, he comforted the dying; in one day he buried sixty dead. Who can tell—who can imagine—the terrible scenes of his lonely watch? On the 4th of October he rejoined the camp, weary and worn. Next day, he laid him down to die. His bones now bleach on that foreign shore; but the red sandstone of Cromarty marks, in gratitude and pride, the birth-place of as true a man as ever breathed, and chronicles a noble deed, above all Greek, above all Roman, fame.

Now go we to the water. An expedition, bound on a mission of peace and kindness to the African, is steaming up the Niger. At first, all goes well. Labourers and instruments of husbandry are landed; farms and colonies are begun; treaties are concluded, and prospects of success open on every hand. Soon, however, the scene changes. Nature ceases to be kind; and sickness comes in appalling forms. Of the three ships, two

return with fevered crews. The third holds on its course, manned by the survivors; in sorrow, but yet in hope; in danger, but without fear or faltering. At length, however, they too are struck down: the ship's head is reluctantly turned; and they steam hastily to the sea for their lives. There was death in the water and in the air.

"About, about, in reel and rout, the death fires danced at night,
The water, like a witch's oils, burnt green and blue and white."

One after another the crew had fevered; and, among the dying or dead, two Europeans alone were left capable of any exertion. One worked the engines, the other took the helm: and as he stood alone on the silent deck one might have thought him the Ancient Mariner.

"Alone, alone, all, all alone—alone on a wide, wide sea,
The merry men so beautiful, and they all dead did lie,
And a thousand, thousand slimy things liv'd on—and so did I.
I looked upon the rolling sea; and drew my eyes away.
I looked upon the rolling deck; and there the dead men lay.
I looked to heaven, and tried to pray; but ere ever a pray'r had gush'd
A wicked whisper came, and made my heart as dry as dust."

Here, however, the analogy fails. That steersman's heart was not burnt up; his prayer was neither unspoken nor unheard. He reached his destination in safety; ghost-like guiding that fever-laden ship through the dark waters of pestilence. Weary with sleepless exertion, himself sickening every hour, he yet gallantly worked out his duty; and in that working was sustained by a mightier arm than that of man or angel. That steersman was the surgeon of the *Albert*—M'William; his helper in the engine room was Dr. Stanger. To them the country owes the preservation of the ship, with that of the else dying remnant of her crew. And to them we are indebted for having, by their gallant courage and intrepid endurance, shown how the members of our profession, when the hour of trial comes, can bear themselves as patriots and as men.

Gentlemen, is it wrong to boast of such deeds and such men? Is it wrong to express a hope even in the words of the brave monarch mourning a hero's death, that there are within this realm five hundred as good as they? Doubtless, it is not for man to boast. But at least this is right. Let us imitate their example; jointly and severally striving, under every circumstance, and in every way, to benefit our fellow man, and advance our noble calling.

One word more. A great work is doing in the earth. While other countries are either stationary or retrograding in their numbers, the Anglo-Saxon race are steadily and largely on the increase. The redundant population, emigrating, spreads far and near throughout the whole world; and the great Disposer of events bids them do his work there. The carrying power, or mercantile marine, is placed almost wholly in their hands. And the gold mines of California, on the one hand, and of Australia and British America, on the other, are but as yesterday given them as means for carrying on the great enterprise. With what object? Not commercial, alone—or even mainly: but the conveying of civilisation and Christianity to all nations and peoples, and tongues. In that high mission the art of healing is destined to play a noble part. Now, as eighteen hundred years ago, it is privileged prominently to assist in diffusing the message of "Peace on earth, good will to men, and glory to God in the highest." And let us note well how surgery, practical surgery, is found to be preeminently honoured thus in arresting men's attention, gaining their confidence and love, and so securing the "mollia tempora fandi." At this hour a surgeon is gallantly ploughing the Zambese, the noble leader of another band, which, in the midst of peril and privation, carries tidings of great joy to the vast continent of inner Africa. And sure I am that there is no heart here that does not beat quicker, and more proudly, as we think on what David Livingstone has already done, and pray for success in what he has yet to do. Other surgeons, highly accomplished in their art, and with souls all on fire with love of their cause and kind, occupy other high places in the field. And in this labour of love, they, with their brethren at home, similarly though more humbly employed, cast a new light and a new honour on our name: or rather they revive somewhat of that ancient glory which it had in Him, when by His hand the blind were made to see, the lame to walk, the dead to live. Surgery has thus her highest object given, and her highest success made sure. From her, and from her sons, faithfully serving Him, honour and recompense will not be withheld; the blessing will come down which "maketh rich and addeth no sorrow."

TREATMENT OF NEURALGIC PAINS BY NARCOTIC INJECTIONS.

By Alexander Wood, M.D., Edinburgh.

[After apologising for not having prepared a set paper, as he had intended, Dr. Wood made the following remarks *vivâ voce*.]

The members of this Association, at all events all those who have paid much attention to the pathology of neuralgia, must be aware that very great additions have been made to our knowledge of the pathology of this disease, and important improvements have been suggested in the valuable work of M. Valleix, published in 1841. That gentleman pointed out the fact, which seemed to have escaped the notice of all previous observers, that the superficial nerves are the ones most commonly affected; and not only so, but that there are certain points in the course of each nerve which are more liable to be affected by pain than the rest of the nerve; and that these points are precisely those where the nerves approach the surface of the body. M. Valleix has noticed four points in the course of every nerve that are liable to be affected by neuralgia, and where the neuralgic pain is more apt to occur than in the other points. The first of these is the point where the nerve emerges from the bony canal through which it passes; the second, the point where the nerve traverses the muscles to ramify in the integuments; the third, the points where the terminal branches of a nerve expand in the integuments; and the fourth, where nervous trunks become superficial during their course. This writer has gone most carefully over the entire nerves of the body; and has shown the various points not only generally in reference to the whole nervous system, but has also, in detail, indicated each particular spot where we may expect the pain to be seated, according to the particular nerve affected. That is the first matter I would like to impress on those who take an interest in the subject. It is of importance to note, that the value of this information is that it enables us to find the place, often very limited in extent, where the tenderness on pressure indicates the propriety of local applications; and also, that from the nerve being superficial, there it is, of course, more within the reach of remedies applied externally.

There is another great fact which M. Valleix has shown; and that is, that while the pain in neuralgia is most generally intermittent, the unfortunate patients attacked by it are subject to have paroxysmal attacks; and, while there is thus a difficulty in applying your remedy during the attack, you can at any moment, even during the intervals of the pain, awaken it by pressing firmly on those points in the nerve I have indicated. Let me give an example. A patient complains, let us say, of a pain in his brow. The pain, he says, is often severe: it comes on, perhaps, after he goes to bed at night; but at this moment he does not feel any pain, and therefore he fears that you can be of no use to him. Well, seat him in a chair, place his head back, and take a coin—a shilling will do very well—and press with the edge of it along the ridge of the forehead, and immediately it comes to the point where the nerve emerges the patient will scream out. I have seen and tested this so often that I can confidently state that it is a case likely to occur often in practice. Or, perhaps, to take another instance: a patient is labouring under sciatica. In that case press firmly near the posterior edge of the trochanter major, or near the superior spinous process of the ilium, or at the upper part of the ischiatic notch, and, in all probability, not only will the point so pressed on exhibit tenderness, but a distinct pain proceeding down the limb will be produced.

A very interesting class of cases is that of young women who suffer from pains about the mammary region and the intercostal spaces. These are very often mistaken for *pleuritis*, and are treated with leeches when there is no necessity for them. If you take a patient suffering from such pains (which are very often accompanied with menstrual irregularities) and, press on the outside of the spinous processes of the vertebræ, or along the lower margin of the rib, you will very quickly awaken the pain, which is quite a sufficient test of the fact that it is neuralgic pain, and not pain produced by inflammatory action; and that fact being so ascertained by the use of the little instrument I have to speak of, the pain is at once abated, and, in many cases, entirely cured.

Another seat of pains which may be treated with this instrument, is the abdominal parietes. There are two parts where I have found the pain to occur very frequently: one

is over the region of the liver; and I am satisfied that the existence of neuralgia in that situation explains many of those cases of supposed liver-disease, in which we cannot detect any enlargement or any apparent organic disease of that viscus. The needle introduced under the abdominal parietes (of course taking great care not to wound the peritoneum), and a narcotic injection thrown in through it, will almost instantly relieve the pain. Another class of cases are pains about the groin, or about the belly where it comes down on the groin. We very frequently find the pains in that situation; and females suffering from them have very often been treated, by mistake, for uterine disease when there was nothing of the kind. In several cases which have come under my own observation, the speculum has been forcibly introduced into the virgin vagina when the patient was suffering from nothing but neuralgia of the abdominal parietes; caustic has been employed, and the most severe treatment adopted, when the little instrument I will soon describe to you would have almost immediately relieved the pain.

But the variety of neuralgia in which of all others I can predicate an immediate and marked success, is the trifacial neuralgia, and especially that species of it where the tender point is found at the supraorbital foramen. The extent of surface affected here is often very limited; indeed, I have sometimes only succeeded in detecting it by pressing the point of a patent pencil-case into the foramen. When once it is discovered, however, the injection may be freely thrown into the foramen; and although in this situation the pain of the application is severe, yet the result is usually a speedy and most successful cure. Sometimes you will find the painful spot at the upper part of the side of the nose, where the infratrochlear nerve emerges from the orbit. Here also the needle may be freely used. By the use of the injection in one or other or both of these places, the severe pain in the eyeball, so often complained of, is at once cured.

I have already stated in the first paper I published on this subject (*Edinburgh Medical and Surgical Quarterly Journal, April*, 1855, p. 265), how I was led to use this remedy. I had studied the book of M. Valleix with great interest soon after its publication, and found the plan of treatment which he recommends, viz. the application of several blisters over the tender points of the nerves, not nearly so successful as he led me to expect, or as it might otherwise be thought to be. I then varied the application very much. I raised the blister, removed the cuticle, and applied morphia (both in a liquid form and as powder in ointments) on the surface, and found, contrary to the experience of Valleix, that the patient derived decided benefit from it. One remarkable case, many years ago, I cured by applying nux vomica to the blistered surface; but I never tried it again, for it seemed likely to kill two people: my patient, an old lady, who nearly died of the poison; and myself, then a young doctor, who nearly died of the fright. The application had a most remarkable effect, however, in curing the disease. The old lady lived for many years afterwards, and died of a different complaint altogether. Another method of treating such cases was to scarify the part and rub in morphia; but that was so brutal a method that you will not wonder that it was soon abandoned.

Then came about a new method of treating aneurism, by introducing the acid solution of perchloride of iron. One day I happened to be using the ingenious instrument constructed by Mr. Ferguson of Giltspur Street, for the purpose of introducing the preparation into a nævus on the head of a child, when it occurred to me that this was the very instrument I had been so long looking for, and the very thing for introducing narcotic injections in cases of neuralgia. I was not long in having an opportunity of testing its suitability. It was in the end of November, 1843, that I was sent for to see an old lady, upwards of 80 years age, who had been kept from sleep for four or five days by a most violent attack of cervico-brachial neuralgia. This lady was an old patient of mine, and I knew she could not bear opium administered by the mouth in any form. We are too apt, I think, when we hear of these idiosyncrasies, to believe that they are mere imagination. In the case of this old lady, Dr. Davidson had seen her many years before, and treating her inability to take opium as a mere freak of the imagination, gave her twenty drops of laudanum. She had hardly taken the dose when she fell upon the floor in a fainting fit, so that I knew there was no hope of getting her to take any opiate to procure sleep. I had a solution made of morphia in sherry wine, because I thought it would not irritate and smart so much as alcohol, and because it would not rust the instrument as a water solution of opium would do. I then introduced the needle into the tender part within the angle formed by the clavicle and acromion. In about five minutes the patient's eyes became injected, and looked just like the eyes of a drunken person, and she complained that her head was in a confused state. She soon afterwards fell asleep. The operation was performed about ten o'clock that night; and on calling next morning at eight o'clock, I was somewhat alarmed to find she had never awakened. She was very soon roused, however; but I determined never to use so much as thirty drops of solution of morphia (equal to the amount I had given her) in the case of a person at her time of life, unless I had previously tested its effect upon the system. This treatment quite cured the old lady of the neuralgic pains, which never returned.

In Edinburgh, I may mention, the use of this instrument has become nearly universal, and the efficacy of the process is well known. I could narrate a vast number of cases in which it has proved eminently successful; but as details would be burdensome, I will only detain you with the mention of one or two.

A lady, troubled with neuralgic pains, had been punctured upwards of one hundred times, always in different places; but no sooner had the pain been driven from one spot, than it took up its seat in another. At last, I had expelled it from every part of the body, except a corner of the head, and there I was puzzled how to deal with it. The fact was, I could detect no painful point in the scalp. I would impress upon you that the instrument is not to be put into the place where the patient complains of the pain, but into the spot where you find you can awaken the pain upon pressure. Well, I could find no pain by pressing upon any part. The lady's husband, a medical man, took her to the German baths, in the hope that they might furnish what was wanting to the cure. She resided there for several months, but without the slightest benefit; and at length her husband brought her back to me, saying, he was satisfied unless I could cure her, nobody else could. I twice examined the part of her head affected; once more, the second time, I succeeded in finding out the point where the needle should be inserted; introduced the instrument; and from that day she has never had a touch of neuralgia again, though she has suffered from rheumatic gout.

Another lady, also the wife of a medical man (and I take these cases, because on that account I am better able to get at the symptoms), was suffering from very intense neuralgia in the forehead, which had lasted, at irregular intervals, for ten days. The pain was so severe that it rendered her completely useless. I at once inserted the needle; the pain became instantly relieved, and soon left entirely. Since then it has never returned.

The question may be asked, But how does this process act? I do not think I am bound to answer that question. It would be a sad puzzle to many of us, I suspect, if we were asked how many other remedies which we use, act. We know the effect they produce; but often we are unable to tell why it is so. But I think there are various considerations which may help us to a conclusion on this question. One of these is, that we know that every disease has both a local and a general effect; and we know, also, that the local effect depends very much on the affinity between the particular medicine administered and the tissues to which it is applied.

I believe the remedy I have been speaking of acts in two ways. First, the injection into the cellular tissue in the neighbourhood of the nerve, the needle being charged with narcotic solution, affects the nerve. In the second place, I believe it acts by being passed into a part which rapidly absorbs the medicine, and sends it through the system, thus producing an almost instantaneous effect. In this little instrument we possess the means of bringing the patient almost directly under the influence of opium. It is truly astonishing to see how rapidly it affects the system. If you throw in a large quantity, you will see the eyes immediately injected, and the patient narcotised; and, in a few minutes afterwards, you will see him in a profound sleep.

One objection which may be brought against this process is the gastric disturbance it produces, bringing on a condition very similar to that caused by sea-sickness. Nepenthe, however, does not seem to produce so much sickness as opium; and is therefore preferable as an injection. Another risk connected with this remedy, and which requires to be avoided with great caution, is that, in the case of elderly people, the injection is apt to take a very strong effect. I have more than once been much frightened by the effect it produces on people advanced in life; though, I am thankful to say, I have never been nearer producing fatal results than in the case I mentioned to you. Another caution I would offer is, that you must

choose the proper patient for the use of the remedy. A great many persons reading accounts of the process have run away with the idea that it can cure almost every possible pain in the human body. Lately, a lady, about 30 years of age, of an unhealthy constitution, came to me from the south of England to be cured of neuralgia. On examining her, I thought I could detect, from the appearance of her eye, the existence of fungus hæmatodes of the optic nerve; and sent her to an eminent oculist, who confirmed my opinion. Some time ago, an English nobleman came here to consult me about neuralgic pains with which he was affected. He had been much relieved by a person whom I had instructed in the use of the instrument, and came to me to be cured. From examining him, I found there was every reason to believe that there was some internal tumour pressing on the nerve, which created the neuralgia, and prevented its cure; and that tumour we could not remove. The pain he had to endure was of the most agonising kind; I never saw any one bear pain with such resolution as he did; but I have seen him writhing in agony, have seen him at once relieved with the instrument, and immediately afterwards able to take a long walk. But, of course, so long as the tumour was there, the relief could only be temporary.

The instrument is of the simplest construction, and is a modification of Mr. Ferguson's already alluded to. It consists of a small glass syringe graduated like a drop measure, and to this is attached a small needle, hollow, and having an aperture near the point like the sting of a wasp. The painful point being accertained, the syringe, being charged, is pressed firmly in to such a depth as to reach the nerve, when the piston being shoved home, the charge is delivered. No hæmorrhage follows; and, in the many cases in which I have operated, I have never seen any disagreeable local effects, except a slight blush of urticaria round the wound.

I beg to thank you for your patient attention, and have to apologise for the imperfect manner in which I have brought the remedy before you. I am now preparing a little *brochure* on the subject, which will ere long, I trust, be in your hands: meanwhile, I shall be glad to be favoured with any instances of success by this method of treatment which you may meet with in practice, or to advise you in regard to any difficulties which you may encounter in its employment.

[The morning after the delivery of the above remarks, Dr. Wood exhibited to the members of the Association, at the Royal Infirmary, the method of operating, on two patients of Dr. W. T. Gairdner. Dr. W. T. Gairdner having explained the nature of the cases, in both of which he had intended to operate, Dr. Wood introduced the needle. The narcotic effect was manifested in a very few minutes, and both patients declared themselves to be relieved.]

THE MODUS OPERANDI OF THE ARTIFICIAL TYMPANUM.

By James Yearsley, Esq.

When, in 1848, ten years ago, I made known to the profession a new principle of treating deafness attended by perforate membrana tympani, I was unable to account physiologically for the success of the remedy, nor could I offer any satisfactory solution of its *modus operandi*.

In speculating upon the subject, and in my innocence, I asked, "Is it possible that moist wool, placed at the extremity of the passage of the ear, can transmit the vibrations of sound in the same manner as the natural membrane, or must we look for some other explanation?"

In 1853, five years after my new treatment was made known, I was enabled to give a probable solution to many points at first involved in mystery, and I then accounted for the success of the wetted cotton thus—"the loss of the membrana tympani deprives the ossicula of their natural tension; the cotton is so adjusted as to restore the necessary support, and then the waves of sound break upon the cotton, through which substance the impulse is conveyed to the ossicula, and so onwards to the brain." From that time to the present, I have seen no reason to alter this view of the question, whilst much additional evidence has been afforded me to confirm it. Of late, the new treatment has occupied the attention of continental surgeons engaged in aural surgery; and during the year 1856, a pamphlet was published by Dr. Ehrard, of Berlin, proving indisputably all that I had said and written upon the subject. I may observe, *en passant*, that Dr. Ehrard has been himself long a sufferer from the condition of ear favourable for the use of my remedy, and that he has used it with great success for many years, after having experimented with other substitutes, including the gutta percha membrane, which he entirely condemns. But the statements of Dr. Ehrard are particularly interesting to me, as establishing the fact of another condition of the ear beyond the loss of the membrana tympani, in which I had myself proved the remedy to be of infinite service, and it is to this that I most particularly wish to call your attention.

Once now and then, it has happened to me to have met with a case benefited by the application of the wetted cotton, in which, notwithstanding the most minute examination, I could discover no perforation of the membrana tympani whatever, a condition of the ear which, as you are probably aware, has been always considered a *sine quâ non* for success; often have I been puzzled to find an explanation for this fact. Well assured that the wetted cotton acted by giving support to the ossicles of which they are deprived when the membrane gives way, I could not but attribute the success of the remedy when the membrane was *not* perforate, to a disorganisation, involving somehow or other the ossicles within the cavity of the tympanum itself. This view is borne out by Dr. Ehrard; for in a museum in Germany, he found a preparation of the tympanum of a child, in which the mucous membrane was thickened, red, and covered with granulations, in which the stapes was entirely buried: the membrana tympani was half-destroyed, its anterior part only with the malleus being present: the long process of the incus was easily seen (the part of the membrane which conceals it being wanting), and might at first have been taken for the handle of the malleus. But, and this is the main point, the incus was withdrawn from the stapes, about a quarter of a line, and the connexion was thus interrupted. The long process of the incus was easily withdrawn from the stapes and just as easily restored to its position; slight pressure upon the malleus and the remaining part of the tympanic membrane at once restored the interrupted connexion between the incus and the stapes.

Let us consider the ossicles during life more attentively; the malleus is firmly fixed in its position by the processus longus, by its manubrium by the tensor tympani muscle, and by the capsule of its joint with the incus also by fibrous bands which fix its head to the bony walls of the tympanum; the same is true of the incus; on the one side it is firmly fixed to the malleus, on the other its short process is fastened to the tympanum. The position of the stapes is similarly insured; its base forms a complete joint with the oval fenestra and the stapedius muscle assists in retaining it.

On the other hand, the incus and stapes have at their junction no fibrous ligaments; they are only united by the mucous membrane of the tympanum, which covers all the ossicles, and which during otorrhœa may so easily give way.

Now let me sketch the successive steps which lead to the disorganisation Dr. Ehrard has described. The cases in which it occurs are generally the subjects of scarlet fever or measles, especially the former. The inflammation of the mucous membrane of the pharynx, which attends these cases, extends along the Eustachian tubes to the tympanic cavity; suppuration ensues; the tympanum becomes filled with pus, for which there is no escape, the Eustachian tube being closed by the inflammation of the mucous membrane; the pus presses in all directions, pulls the ossicles asunder, tearing the inflamed mucous membrane at the junction of the incus with the stapes; and at length the membrana tympani yields to the pressure of the accumulated matter. Such a rupture of the membrana tympani but rarely heals; and we have then the permanent perforation, for the relief of which my wetted cotton happily adapts itself as a remedy.

But is it not possible, nay, probable, that many cases occur in which the disunion of the ossicles takes place from the ulcerative process, as in the preparation cited by Dr. Ehrard, the accumulation of pus being insufficient to force its way through the membrana tympani; but the inflammatory condition of the mucous membrane subsiding, without involving the membrana tympani, the pus makes its way down the Eustachian tube, the natural route for pent-up secretions in the tympanum? In no other way can we account for benefit arising from the employment of the cotton in cases of deafness unattended by perforation of the membrana tympani.

However it may be, there can be no doubt that the *modus operandi* of the wetted cotton, or the artificial tympanum, as it is called, is purely mechanical. By the partial or entire loss of the membrana tympani, the ossicles are deprived of

their natural tension, and deafness is the result. The cotton is so adjusted as to re-supply the ossicles with the *support* necessary for the conduction of sound to the fenestra ovalis, and hearing is restored. In like manner, in cases in which the ossicles (the incus and stapes) become disconnected by the ulcerative process, the cotton exercises the *pressure* necessary to bring them again into apposition, so that sound may once more press onwards to the brain, where the mind realises its impression.

Support in the one case is the *modus operandi* of the treatment; support, with slight pressure, in the other.

In conclusion, the practical deduction to be drawn from this new fact in the history of the artificial tympanum is, that all cases of deafness traceable to disorganisation of the drum of the ear, as a sequela to scarlet fever or measles, should be tested as to the applicability of the wetted cotton for their relief.

Illustrations
OF
HOSPITAL PRACTICE:
METROPOLITAN AND PROVINCIAL.

ST. BARTHOLOMEW'S HOSPITAL.

ANEURISM OF THE EXTERNAL ILIAC AND FEMORAL ARTERIES.

Under the care of J. PAGET, Esq., F.R.S.

JOHN RING, aged 38, was admitted into St. Bartholomew's Hospital on April 16th, 1858, under the care of Mr. Paget. The patient was a small lightly made man; he enjoyed good health, and was temperate in his habits. In the right groin was a large, elastic, and pulsating swelling, crossed and impressed by the crural arch. In the thigh the swelling reached as low as the saphenous opening, through which it protruded and became subcutaneous; a portion could also be felt beneath the tensor vaginæ femoris. Above the crural arch the swelling could be felt for about two inches and a half upwards and backwards. Here it appeared to end. Externally it could be traced nearly up to the anterior superior spine of the ilium; and in the opposite direction as far as the external abdominal ring. The pulsation was strong and equally forcible in all directions, it was synchronous with the pulse, and was accompanied by a loud rough bruit. The pulsation of the arteries of the limb below was unaffected.

The patient complained of pain in the swelling, though the movements of the limb were little impaired, the cellular tissue was œdematous, and the skin considerably congested. There was no cardiac murmur; the pulse was 90, full and strong.

The swelling had been noticed three years, and was attributed to violent straining in lifting heavy weights. It was said not to have increased in size since first discovered. The patient had followed his occupation without inconvenience till within the last month. A fortnight before admission, he had taken a walk of seventeen miles, to "walk down" the swelling of the limb. This effort cost him no inconvenience, though during the last week the œdema had rapidly increased.

On April 19th, Mr. Paget operated for ligature of the external or common iliac arteries, as circumstances might decide. On dividing the fascia transversalis and passing the finger into the iliac fossa, this cavity was found almost filled with a firm, smooth, convex swelling. This swelling was behind the tumour felt in the groin, and was too deep in the fossa to be felt from the front. It extended inwards beneath the iliacus muscle and fascia to the psoas, and below it was continuous with the pulsating mass felt above the crural arch; above, it extended to within an inch of the kidney; it did not pulsate, but was everywhere firm, and apparently solid. As neither the external, nor common iliac arteries could be reached, and as there was apparently a solid tumour occupying the iliac fossa, the operation was abandoned, and the patient was put to bed. The immediate consequences of the operation were soon recovered from. The swelling gradually increased in size, especially towards the abdomen, the lower and right half of which it eventually occupied. As the tumour grew, so did the pulsation diminish in force, and after about five weeks became no longer perceptible, the mass becoming solid and inelastic. For a few days after the operation, the œdema and venous congestion of the lower extremities were less; but soon they returned, and the limb became larger than ever. At times the patient suffered from attacks of pain in the limb. He gradually lost strength, became pale and emaciated, and a fortnight before his death suffered a considerable loss of arterial blood from that part of the growth which had begun to protrude at this time through the scarcely closed wound of the operation. Two days later, another and more severe hæmorrhage occurred, and he died on June 29th, ten weeks after the operation.

The *post mortem* examination disclosed a large diffuse aneurism of the external iliac and common femoral arteries. The swelling extended from the umbilicus to the lesser trochanter, filling the lower half of the abdomen on the right side, and the greater part of the corresponding side of the pelvis. The urinary bladder was pushed across to the left of the median line, and the cæcum was lifted to the umbilicus. The right common and external iliac artery as it ran over the median surface of the swelling, was compressed, but pervious; its coats were healthy to within two inches of the crural arch, beyond which point, its walls were thickened and rigid with calcareous deposits, as was also the commencement of the femoral. In the posterior wall of the vessel there was an opening an inch and a quarter long, which led into the cavity of an aneurism. The edges of the opening were regular and smooth, it was covered with firm decolorised clot; the lining membrane of the vessel was not to be traced for more than an inch beyond the mouth of the aneurism, the sac being formed of the neighbouring tissues condensed and compressed. Opposite the scar of the operation the covering had given way; the iliac fossa was hollowed out and rough; the body of the last lumbar vertebra was impressed, and the lesser trochanter was bare, from the pressure they had undergone. The psoas passed through the centre of the swelling; it was softened and partially disintegrated, and was separated from its connections. The iliacus muscle seemed to have disappeared. The swelling itself consisted of blood-clots in various stages of organisation, and without the concentric arrangement of a well formed aneurismal clot. The femoral artery in the thigh was healthy; but just below the opening into the aneurism it was occupied by a firm, decolorised, adherent coagulum. The heart and other large vessels were healthy.

REMARKS. This very interesting case, for the notes of which we are indebted to Mr. T. Smith, was for a long time a problem to the gentlemen attending the practice of the Hospital. On the one hand, the appearances of aneurism in the tumour, which projected through the saphenous opening, were (as will be seen from the description,) pretty plainly marked; the pulsation was of the aneurismal character, and was accompanied by a bruit. On the other hand, the frequency of pulsating malignant tumours in this situation,* the absence of any alteration in the pulse lower down the limb, and something in the aspect of the patient, caused a suspicion in the minds of many who saw the man before the operation, that the disease was of a cancerous nature, and unconnected with the vessels except by position, and this suspicion was, of course, confirmed, when the dissection during the operation revealed a solid and non-pulsating tumour, situated apparently away from the original swelling. It is in this latter feature that the case is so peculiarly interesting, as showing how far the ordinary symptoms of aneurism may be modified by changes in the sac, so that the case may not admit of diagnosis even at the operation. It is interesting also in another respect, as showing the great extent of unseen disease which is often concealed behind iliac and femoral aneurisms, so that the artery is frequently inaccessible from disease spreading along it inside the belly, while externally the aneurismal tumour appears quite limited. An instance of this occurred under Mr. Fergusson's care in King's College Hospital, some years ago, in the person of a military officer, a man of great size and very stout, when the vessel was found diseased for a great extent, occasioning a very protracted and difficult dissection before it could be secured. In that case, indeed, a ligature was ultimately cast round the vessel, but so near the bifurcation that it was thought doubtful whether the case could be successful. The patient, however, did not rally from the more immediate effects of the operation.

* On the subject of these pulsating tumours, see volume for 1857, p. 707.

ST. GEORGE'S HOSPITAL.

LISFRANC'S AMPUTATION.

Frederick S., aged 14, was admitted on June 10th, in the evening. He had fallen between two fly-wheels of a steam-engine in motion. On admission, it was seen that he had received one large lacerated wound extending all across the neck, just below the occiput; and seven or eight others, smaller, but still many inches in length, over the right scapula and the back part of the shoulder and arm, some of which passed into the substance of the deltoid muscle, while others exposed only the fascia. All the phalanges of the right foot were completely smashed, and several of the joints were opened. The soft parts were also partially detached from the dorsum of the metatarsal bones, but none of the latter were fractured. On the sole of the foot, the integument was sound. Mr. Prescott Hewett, who was sent for, in Mr. Hawkins's absence, decided on performing Lisfranc's operation. This was accordingly done, through the line of tarso-metatarsal articulations, at 9.30 P.M. A strong scalpel only was used. A little of the soft parts on the dorsum was made available for a short anterior flap, and the parts united by sutures and strapping.

Very little fever followed at first; but in a few days, the wounds having sloughed and extensive eschars separated exposing the surface of the deltoid muscle, he suffered for about a week from slight irritative fever, the pulse being above 100, the tongue foul, and skin hot. This, however, required no special treatment; the wounds soon assumed a healthy appearance, and the stump of the operation went on well throughout. At one time, some retraction of the heel was apprehended; but this soon passed over, and he was discharged early in August, with the stump soundly healed, and able to walk quite well. The wounds on the back were almost closed, and had not occasioned any loss of motion.

Remarks. Of the partial amputations of the foot, Lisfranc's is by far the most unfrequent; partly, perhaps, on account of the difficulty of the operation, although chiefly on account of the comparatively few cases to which it is applicable, since in accidents it is rare to find sufficient soft parts left to form the flap, even if the injury to the bones do not extend beyond the metatarsus, and in diseases of the metatarsal bones a less extensive operation is usually sufficient. Still the troublesome proceeding necessary for disarticulating the metatarsal bones frequently leads to the preference of Hey's operation (in which the head of the second is left behind), even in those cases where Lisfranc's might be done. We have seen such portions of bone left behind become the source of long continued irritation and loss of the power of bearing on the foot, which lasted at any rate for many months, and might perhaps be followed by permanent irritation; and we have no doubt that Lisfranc's operation ought to be selected in all cases in which it can be done, offering as it does a smooth cartilaginous base for the stump, leaving no cancellous tissue of bone exposed, and preserving the attachments of the great flexor muscles of the foot to balance the action of the tendo Achillis.

Original Communications.

A CASE IN WHICH ARSENIOUS ACID WAS USED TO PROCURE ABORTION.

By H. G. Trend, Esq., Long Sutton.

I have searched in vain to find any mention of the use of arsenic for the purpose of procuring abortion. Thinking, therefore, that the details of the following case may prove interesting, I have extracted the particulars from my note-book.

About the middle of September last year, I was requested to see the daughter of a respectable farmer in Northamptonshire, who was reported as very ill. I called the same day, found her in bed, looking thin and haggard, complaining of prickling pains in both legs, from the soles of the feet to about two inches above the knees. Sensation was completely lost in the left, and considerably impaired in the right leg. In both there was total loss of all power of motion.

She stated that she had been unable to get about for the past fortnight; and that for some weeks previously, she had experienced considerable difficulty in doing so. She had no appetite; the bowels were irritable; and the urine was high coloured and scanty. She complained of no pain beyond that mentioned in the legs. Having known her as a healthy active young woman for four or five years, I felt fairly at a loss to diagnose her complaint; I therefore sent her a *placebo* that evening, resolving on the morrow to give the case a thorough investigation.

On my visit the following morning, she remained much in the same condition. On attempting to remove the bedclothes, for the purpose of examining the abdomen, she objected. This awakened suspicion in my mind; and on placing my hand there, that suspicion was confirmed, by the size and hardness of the belly. I immediately taxed her with being in the family way, which she did not attempt to deny. It then struck me that her present weakly condition might be produced by something taken to produce abortion. After considerable pressing, she acknowledged that she had been taking arsenic twice a day for the last three months, under the direction of the father of the child, who had told her that it would cause its death, and that no one would be any the wiser. On further inquiry, it turned out that she had swallowed during this time *two tablespoonfuls of arsenic*, and that her adviser had cut out a piece of wood, the shape of a small mustard spoon, telling her to take as much as would go in the bowl (about two grains) twice a day. It seems the arsenic was coloured with soot. She informed me that, about a month after she had been pursuing her plan with the arsenic, she was seized with sickness and diarrhœa, that she then left it off for two days, when, those symptoms being relieved, she again persevered with it regularly up to three days before my seeing her. She also stated that she occasionally suffered from intense thirst and pain at the pit of the stomach; that the bowels had been very loose, and the motions tinged with blood for about six weeks. She had lost flesh considerably, and seemed at times hardly able to collect her thoughts. The conjunctivæ were not at all injected. The most curious symptom was the perfect paralysis of the left leg, and the only partial paralysis of the right. Christison has described this affection as "an imperfect palsy, resembling what is occasioned by the poison of lead." Now, in this case, it certainly appeared very different from the cases of lead palsy I have met with. The sharp prick of a pin had no effect upon the left leg; and a hard pinch was requisite to excite motion in the other. After ascertaining as much as I could from the patient's own statements, I examined her carefully with the stethoscope, and soon discovered that she was about seven months gone, and that the child was living, the *bruit placentaire* and the pulsations of the fœtal heart being both very audible. From the fact of her being far advanced in the family way, I thought very active purgation to be unadvisable, so I contented myself with ordering her a small dose of castor oil twice a week, and half-drachm doses of the sesquioxide of iron three times a day. Under this treatment, and a generous diet, she gradually improved, and was able to walk about with the assistance of a stick by the end of October.

I attended her in her confinement on November 12th. It was a footling presentation, and the child was stillborn, owing to the inefficiency of the expulsive power. It was, however, a very fine boy, well nourished and perfect in every respect, evidently showing that the arsenic had exercised no influence over it. She was soon convalescent from her confinement. There was an abundant secretion of milk, which however soon disappeared under my usual treatment with the extract of belladonna. She gradually recovered the use of her legs, and by Christmas was able to resume her ordinary domestic duties.

I saw her some few weeks ago, when she appeared tolerably well, complaining only of weakness in her ankles. I recommended her plenty of fresh air, regular exercise, good diet, and a pint of porter daily. I may as well state that the father of the child was tried at Peterborough Sessions, in January last, "for administering a certain noxious drug, with intent, etc.", upon which occasion I gave evidence for the crown. He was found guilty, and sentenced to two years imprisonment. I grieve to add that he was a married man, with ten children.

Remarks. This case presents several important and interesting features, foremost among which is the quantity of arsenic taken. Altogether, it must have been at least an ounce. Dr. Letheby, in the *Medical Gazette* for 1847, reports a case where two grains and a half proved fatal. In the same publication for 1848, half a drachm of Fowler's solution, equal to

two grains of arsenic, is reported as having proved fatal. Hahnemann thinks one or two grains may prove fatal in a few days. Dr. Christison agrees with this. Professor Taylor thinks two or three grains a fatal dose. On the other hand, Pereira gives a case where half an ounce was swallowed after a full meal without any effect.

In this case of mine, did not the soot exercise a very powerful, in fact a saving influence? I remember having read somewhere that a French chemist thought charcoal an effectual antidote for this poison, and took several grains at one dose without any ill effect. Orfila, in his *Toxicologie Générale*, also alludes to it, adding that other insoluble powders have the same effect, forming a coating in which the poison is enveloped. It seems to me that this adulteration of arsenic deserves some consideration and inquiry, not only in regard to medico-legal cases, but also in relation to its effect upon wheat dressings and other agricultural appliances; for if the effect of the arsenic is thus neutralised, it is a matter of some importance to the farmer.

Another question that the case seems to open up, is, can the constitution of a person be familiarised to the use of arsenic? Here this young woman for three months had been dosing herself with no inconsiderable quantity. One is naturally led to think that if she had taken *smaller doses*, she might have gone on with impunity. I do not believe all the absurd stories of the reputed Styrian arsenic eaters, as related in *Chambers' Journal*, nor the enchanting description of the effects of arsenic eating, given by Professor Johnston in his *Chemistry of Common Life;* but it seems warranted by the facts that certain states of the system, or certain peculiarities of constitution, do render this deadly drug occasionally almost harmless. Further experiments seem required to set this question at rest.

THE APPLICATION OF CARBONIC ACID GAS TO THE INTERIOR OF THE BLADDER.

By T. Skinner, M.D., Liverpool.

[*Concluded from page* 628.]

v. *Alleged disagreeable, dangerous, and poisonous Results.* So far as disagreeableness is concerned, the application in some few cases, even the introduction of the catheter, is painful. I have marked this as being very much so in the *phosphatic* diathesis, which state ought first to be subdued or mitigated by appropriate means. There are some cases, doubtless, where the application may not suit at all: but why "ride the hobby to death"; because the means will not suit every case, why even find fault? The error lies in our own inexperience of the agent in such cases: we must improve our diagnosis as to the cases most likely to be benefited by it. Besides, in the use of this gas or of any other means, it is necessary to take everything into account—the condition of the whole system, particularly the digestive and assimilative powers; and the pathological condition of the urine, as also the state of the kidney and pelvic viscera. It is only an *auxiliary* to our therapeutics of the urinary bladder; and it is our duty, if certain conditions exist, demanding or more likely to yield to other means, that they should be adopted before having recourse to the injection of the gas. To expect that it is to work miracles, and do everything in every case, is downright absurdity.

Dr. Johns alludes to "dangerous and poisonous" results as having been observed by M. Charles Bernard, and as recorded by the latter in the *Archives Générales de Médecine*, x, pp. 529-548, referred to in the *Medical Times and Gazette* of April 10th, 1858, p. 380. M. Bernard does not mention the number of the cases in which he has tried the simple injection of carbonic acid into the *vagina*, according to Professor Simpson's method; but he says, "In *all* the patients, besides the local anæsthetic effect, more or less of general accidents were observed, these being usually very slight, but in one case so considerable as to compel the discontinuance of the remedy." Dr. Bernard continues: "The symptoms consisted in cephalalgia, giddiness, weakness, or confusion of vision, nausea, general lassitude, and more or less complete somnolence. .... They entirely resembled those of incomplete asphyxia from carbonic acid gas. These symptoms are, no doubt, due to the absorption of the gas."

This is indeed an isolated case. I am sure there is no medical practitioner in the world who has prescribed the injection of carbonic acid into the vagina on such an extensive scale as Professor Simpson. Thousands have used it, at his dictum, thrice a day; some for months at a time; and it is strange that he has never observed such formidable symptoms. I administered it to hundreds in his practice myself, and I never witnessed a single head symptom, or any symptom approaching narcotism. I have *breathed* the gas diluted myself, and have made dozens breathe it for half an hour at a time, without observing any such phenomena. I have injected the bladder with it at least one hundred times, and only once observed lethargy and drowsiness; and even in this case (No. 4) I had before, and have many times since, injected the bladder without the slightest symptom of carbonic acid or any other poisoning. The cause of the lethargy and somnolence in this case was the approach of an ordinary *cold*, which developed itself next day. I would not have noticed it, had it not been for the remarks of Dr. Johns and Dr. Bernard.

Dr. Bernard attributes the symptoms in his case to "absorption of the gas by the mucous membrane". We have good reason to believe that the pulmonary, alimentary, and vesical mucous surfaces do not absorb carbonic acid to any extent; but it is certain that the former two excrete it, or throw it off by exosmosis, in no small quantity. In the large intestines, from 40 to 70 per cent. of carbonic acid alone had been observed. In the small intestines, from 20 to 40 per cent. has been measured in cases of tympanitis, without narcotic symptoms from absorption. (Bostock's *Physiology*, vol. ii, p. 491; Magendie's *Physiologie*, tome ii, p. 85.)

The uterine mucous surface itself is subject, in disease, to secrete gases—whether carbonic acid or not, it would be difficult to say; but in physometra complicated with pregnancy, M. Leduc, in the *Dict. de Médecine*, states that he has seen, after the passage of a dead fœtus, an impetuous rush of gas escape from the uterus, having a sulphureous smell, which burnt with a violet-coloured flame. (*Cyclopædia of Practical Medicine*, vol. iv, p. 383.) This was not carbonic acid, at all events; but it only corroborates what I have attempted to prove—that mucous surfaces generally do not absorb gases, but rather secrete them, and convey them out of the system, such as the carbonic acid and sulphuretted and carburetted hydrogen gases of the alimentary canal. Why the vaginal mucous surface should be the only exception, is a puzzle. Dr. Bernard may have driven the gas into the peritoneal cavity through the Fallopian tubes. This cavity would be much more likely to absorb it than a mucous surface; but such an awkward mistake is impossible by my method.

If absorption took place from the vagina, why did it occur in one case only among many thousands? If absorption was the rule, my cases had ample opportunity, having nine hours to absorb four ounces; whereas, in Drs. Johns's and Bernard's cases, I suppose fifteen minutes is the very utmost allowed. I had a case of a lady, a few days ago, Mrs. W., aged 23, who retained the gas all night and a considerable portion of the day before—say sixteen hours—during which time she passed urine only thrice: very little of the gas ever came away, most likely owing to its absorption by the urine.* In this case there was no narcotism, nor any bad symptom whatever. This lady labours under chronic inflammation of the cervix uteri, with ulceration of its cavity, and is being treated for the same. She had not been able to retain her urine for fifteen minutes or half an hour, sometimes not even for five minutes, for many months. I saw the patient again yesterday; and she informed me that, since the *single* injection, she has been a new being. Last night she had only to rise once, and during the day she had passed urine only three or four times at the most. Before the injection, she never could go out for a walk without requiring to go into a house every fifteen minutes or so. To-day, when I called, she had been out taking a long walk, and actually crossed the Mersey in a steamboat, occupying fully two hours and more, and never had the slightest call to micturate; and she had not had a call since 8 A.M.: it was

* In proof of the urine being the medium of absorption, I tried the following simple experiment. I got from a toy-shop an air-ball of India-rubber, fixed it to the end of D of my apparatus, and injected into its interior six ounces of fresh healthy urine. I then added four ounces of carbonic acid, shut the stop-cock, and immersed the whole in water kept at the temperature of 90° Fahr. or thereabout, now and again giving it a gentle agitation, to imitate the movements of the body. Within three hours, three ounces of the gas were absorbed by the urine, and not by the caoutchouc. This latter material is necessary by its elasticity to resemble the mechanism of the pressure afforded by the resistance of the muscular coats of the bladder, which pressure, I have no doubt, favours greatly the absorption of the gas. I do not think the gas is usually absorbed so rapidly as shown by this experiment; my anxiety for its success must have tempted me to agitate too much and too often. In itself, the fact of the absorption of the gas by the urine, militates against its absorption in poisonous doses by the mucous membrane.

now 1 P.M. In this case, its specific action is very manifest, however temporary the effect.*

I think I have said sufficient to prove the falsity of the fear entertained of any dangerous or poisonous result—at least, so far as my method is concerned.

VI. *Concluding Remarks.* I would not have it understood that I attribute every good which resulted, in the few cases I have given, to the simple injection of carbonic acid gas into the bladder. As I have said before, I look upon it only in the light of an *auxiliary;* and I do not believe we have an agent so powerful and so universally efficient and safe in such an intractable class of complaints as we have in this gas, used as I have described. I am well aware that many observations are still to be made regarding it in such cases. I would suggest the trial of it in spasmodic or irritable stricture in the male. Doubtless, if a catheter could pass the stricture, there would be no use in injecting the gas; but might not a little of the gas be injected into the urethra, with or without chloroform, by means of my instrument, and retained there, so as to allay the morbid irritability of the mucous and muscular tissues in front of the stricture? Some might possibly pass through it; and, when it had become dilatable, a small catheter might be passed, and the bladder injected. According to Abernethy's surgery of irritable surfaces, this would be put down as bad surgery; but, in his day, the use of carbonic acid gas as a local anæsthetic was unknown.

Again, I was led to the following subject by some observations I made while examining the urine of Case IV. I examined the urine passed *immediately before* the injection of the gas on two separate occasions, and I also examined the urine passed *immediately after* the injection on each of the same occasions (an interval of three hours having elapsed, the gas being retained, and no meal, medicine, or exercise being taken). All the examinations were made twenty-four hours after the water was passed, to allow any sediment to fall. The following brief analysis will show my point:

1. *Immediately before the Injection.* Specific gravity 1024; highly acid; clear straw colour; slight cloud of mucus, entangling large rhombic and other crystals of uric acid in great abundance; otherwise normal.

2. *Immediately after the Injection.* Specific gravity 1024; highly acid; hazy orange colour; thick cloud of mucus occupying a quarter of the bulk of the urine, with a copious admixture of urate of ammonia and epithelial scales, one or two crystals of oxalate of lime, but not a single crystal of uric acid; otherwise normal.

I only give one analysis of each, as the other was almost identical with the above.

Can the free carbonic acid so affect the urea or uric acid in solution in the bladder as to cause it to be precipitated as urate of ammonia when discharged from the organ? I would, *à priori*, have expected the uric acid precipitated from its solution, unless temperature and other causes modified this result. I feel myself not chemist enough to solve this difficulty; but, having twice observed the same phenomenon before and after injecting the gas in a patient with a marked lithic acid diathesis, I thought, if it was corroborated by future observations, the injection of the gas into the bladder might be used as an auxiliary in the litholysis, or a prophylactic in the treatment of uric acid, as well as of phosphatic calculi. It is a remarkable fact in connexion with this subject, that most of our solvents of calculi contain excess of carbonic acid gas, as is the case with the waters of Vichy (*grande grille*), Seltzer, Pyrmont, Carlsbad, etc.; and most of our artificial solvents, such as a solution of the bicarbonate of soda, saturated with carbonic acid gas, owe their efficiency in the phosphatic diathesis to this gas, and in the lithic acid to the alkali.

Whatever may be said about the solvent or decomposing (?) power of carbonic acid gas, in regard to uric acid calculi, there can be no doubt of its use in the phosphatic. Dr. Druitt says of the action of carbonic acid on phosphatic calculi, it acts "by disintegrating the animal matter which connects them together". (*Surgeon's Vade Mecum*, 6th edit., p. 547.) Dr. Willis, in his excellent article "Calculus", in the *Cyclopædia of Surgery*, p. 571, says: "The earthy phosphates, and especially the phosphate of lime, are only held in solution by virtue of the excess of acid with which they are combined, or in consequence of the presence of some other free acid in the urine, which can in many cases be demonstrated to be the carbonic. The neutral phosphate of lime is a salt to all intents and purposes insoluble. Phosphate of magnesia, another urinous salt, is not very soluble, requiring at least fifty times its weight of water to take it up. Phosphate of ammonia, indeed, is soluble enough by itself; but in combination with the phosphate of magnesia, as it always exists in urine, it becomes exceedingly insoluble. A slight excess of phosphoric acid, and, as it would appear, the presence of carbonic acid in some cases, put an end to the insoluble character of these salts; as superphosphates or carbophosphates, they become readily soluble, and are safely carried out of the system." Those who have more to do with calculi than I have would do well to investigate this point, the more so now that a method of injecting the bladder is known, and of retaining it pure for almost any length of time, and with perfect safety.

VII. *Summary.* 1. In most painful affections of the pelvic organs, arising from nervous, sympathetic, or organic causes, carbonic acid exerts an anæsthetic and sedative effect, particularly when injected into and retained in the bladder.

2. In most forms of incontinence of urine, in the male or female, it is temporarily or permanently a specific.

3. According to the method I have described, there is no danger of over-distension of the bladder, or of narcotic poisoning by absorption or otherwise.

4. In *acute* inflammatory conditions, it is likely to aggravate the symptoms; in *chronic* states, it is the desideratum; hæmorrhage and pus being no obstacles to its employment; in which condition, previously washing out the viscus is advantageous.

5. The frequency of its repetition must be guided by circumstances; it has been injected three times a day in some few cases with safety; twice a day more frequently with equal safety; often once a day, or once in two or three days, according to circumstances and the nature of the case.

6. In some very irritable states of the bladder, it is well to dilute it with more or less of atmospheric air, and regulate the time of retention and repetition.

7. Where it agrees, the patient ought to be made to retain it as long as possible, *passing the urine* when necessary, but *retaining the gas.* If debility or lassitude are caused by its presence in the bladder, it ought to be expelled.

8. The state of the kidneys and urine, and the digestive and assimilative organs, should be attended to, as also the condition of the pelvic viscera.

9 It promises well as a chemical litholite in the solution of phosphatic calculi, and may also prove useful in uric acid and other calculi.

10. In irritable bladder and spasmodic stricture in the male, it may be found useful; it only requires a trial.

* This was written about July 27th. On August 16th, the printed proof was revised; and I have to note that the enuresis in this lady's case remains successfully cured.

ON SIMPLE BOILS.

By John Watson, M.D., Southampton.

The subject I am about to offer some remarks upon is generally consigned by the active practitioner to milk of sulphur and old women; and when he is called on to treat it seriously, from want of fixed principles to guide him, he seldom has cause for any great satisfaction at the result. At all events, I would say thus much of myself, without presuming to speak of others. To keep in due form, I will introduce the matter as presented in the following case.

A. B., aged 41, of spare bilious habit, having undergone much business anxiety, and living in the country, became attacked with boils in October last; but as they were solitary, occurring at intervals of a week or two, he sought no medical treatment.

In January of the present year, from their numbers increasing, and his appearance and feelings indicating a state of general debility, he placed himself under my care. He took steel with quinine, an occasional aperient, and was recommended generous diet, with bitter beer (having previously been a teetotaller), and free exercise in the open air. After a little perseverance in this plan, he recovered, and remained well for about two months. At the end of this period, however, he found other boils making their appearance on his hip and thigh, having had upwards of thirty since the time first mentioned. Each boil generally commenced as an itching *papule* in some portion of the skin, which gradually passed through the *pustular* and *tubercular* stages, till it ripened into the usual form of an exquisitely painful *abscess*, with a central slough of skin and areolar tissue. As soon as this slough was cast off, the abscess quickly healed, and the papule re-appeared elsewhere, often in the precisely corresponding part on the oppo-

site side of the body. It thus presented the symmetrical character common to some other general diseases; and the same painful process was again and again gone through. Occasionally, the first stage consisted in the appearance of a small painless subcutaneous tubercle, which ran through an identical series of changes. He reported himself in good health, with good appetite; and apparently all the bodily functions were well performed. His urine, however, was anæmic in character, and contained sugar. Puzzled to account for a repetition of the attack during the time when he was scrupulously adhering to the plan of treatment laid down, I yet discovered he had deviated from the regimen recommended by returning to his usual habit of taking animal food once a day only, instead of twice and thrice, as advised. A diet nearly approaching that which obtains for diabetics was now enforced; full doses of nitric acid were given; and the result was a speedy removal of his tormenting complaint.

This case, as far as I have observed, may be taken as a type of its class; the points worthy of note being the causes of the disease; the anæmic urine, (that is, pale and deficient of urea and the urates), and the rapid subsidence of each attack on the free use of azotised food.

The occasional presence of sugar in the urine of persons suffering from boils, and the remark that these are a frequent concomitant of diabetes, are facts long familiar to the profession; but I do not think they have had their due influence on our views of the nature and treatment of this disease. Hence I venture to append some further remarks.

Etiology. We must look for the *proximate cause* of boils to that part of the nervous system which presides over the intricate processes of nutrition and assimilation, and can only call it a mal-assimilation of the gelatinous tissues, leaving them prone to inflame and slough, from their capillaries being morbidly sensitive to the presence of the *exciting cause*, which is very clearly toxæmia. The precise poison is an excess of oxidisable material, though not always to be detected as sugar in the urine. Its source may be either—1, an excess in the glycogenic function of the liver; 2, a failure in this organ to elaborate the amylaceous constituents of the food for removal by the respiratory process; or 3, defective eliminative action of the liver and skin, or some other.

Again, the *predisposing cause* may be—1, prolonged mental or bodily fatigue; 2, the use of a diet deficient in azote; 3, insufficient exercise; or 4, a residence in a warm and moist, or impure atmosphere.

Treatment. Assuming the correctness of these views the treatment becomes simple and intelligible. The over-wrought nervous system must be tranquilised by rest. We should increase the amount of azotised food, and forbid that which is saccharine or amylaceous; enjoin active out-door exercise, the use of the bath, and if the patient reside in a low damp situation, a removal to an open hilly country.

If stimulants be thought desirable, my experience is more favourable to the use of wine than ale, and theory would lead us to prefer wine. It is probable indeed that the frequent occurrence of this complaint in habitual beer-drinkers has given rise to the common error, that it presents two varieties, one attacking the plethoric, the other the debilitated.

In regard to medicinal treatment, I have lately confined it to an occasional mercurial aperient, and full doses of nitric acid, and so far have reason to think it satisfactory. I have formerly administered alteratives and tonics (the simple bitters, quinine, and steel,) for weeks without benefit.

Locally, I think we should palliate only, as by warm water dressing, or poultices. If let alone the slough soon becomes loose, and may be lifted out with the forceps without giving any pain.

ON ACUPUNCTURE.

By T. OGIER WARD, M.D., Kensington.

I HAVE read in the JOURNAL with much interest the lectures of Dr. Brown-Séquard, especially the fifth, which seems to be the most practical, inasmuch as the experiments detailed prove that irritation, etc., of one part, may be transmitted by reflex action to another more distant part, in the following manner. The irritation is conveyed by an afferent nerve to the nervous centres, and thence is reflected to the more distant part through the sympathetic, which, by producing a contraction of the vessels, reduces the hyperæmia of the affected part. In this way Dr. Brown-Séquard explains the benefit derived from the actual cautery in facial neuralgia and affections of the eyes, when applied to the ear of the same side, or even between the shoulders. A completely opposed explanation of the action of the actual cautery has been recently given by Dr. Inman, in a paper read to the Lancashire and Cheshire Branch; and certainly Dr. Brown-Séquard's experiments, though they establish the facts in some cases, do not afford any explanation why this action of the sympathetic nerves is confined to a part in a morbid condition, and does not extend, at least, as far as can be ascertained, to the whole system. But whether Dr. Brown-Séquard or Dr. Inman be right, *non est meum tantas componere lites;* the object of the present communication is to offer an explanation, deduced from Dr. Brown-Séquard's experiments, of the benefit derived from two operations much less severe than the actual cautery, which, from its formidable appearance, is never likely to be used extensively in this country, at least, in private practice.

The operations I allude to are, the injection of opiates beneath the skin over the nerve affected in tic douloureux, and acupuncture; in both of which, the great and immediate benefit, by the cessation of the pain, is to be attributed to the punctures, and not to the opiate injected. I do not deny that the opiate may be absorbed, and produce a certain amount of direct effect on the nerve where this is situated superficially; and the profound sleep produced in some instances must be attributed to the opiate; but in cases where the injection has been successful in deeply seated pains, I believe we may reasonably ascribe the cure to the simple puncture, especially as we meet with the same results from acupuncture. Hitherto the *modus operandi* of acupuncture has been involved in mystery, but now Dr. Brown-Séquard's discovery of the reflex action induced by counterirritation, appears to afford at least a plausible explanation of it.

Acupuncture is a remedy that seems to have its floods and ebbs in public estimation; for we see it much belauded in medical writings every ten years or so, even to its recommendation in neuralgia of the heart, and then it again sinks into neglect or oblivion; and it is not unlikely that its disuse may be occasioned partly by fear of the pain, and partly by the difficulty the patient finds to believe so trifling an operation can produce such powerful effects. Another reason for its neglect may be, that, like every other remedy, it fails occasionally, and the practitioner, disgusted at having persuaded his patient to submit to a pain, which, though slight, has been attended with no benefit, will not again undergo such a disappointment. However this may be, its use is not as frequent as it deserves; and now that we know the *rationale* of its operation, I venture to bring forward a few cases in illustration of its remedial powers, in order that others may be induced to give it a more extensive trial, and thus ascertain its true value in the treatment of neuralgic or rheumatic pains.

CASE I. A middle aged labourer came to me with a chronic rheumatism of the parts about the right shoulder, particularly in the deltoid, which was so painful that he could not raise his arm horizontally. I inserted two needles into the muscle, one just below the head of the humerus, and the other near the insertion of the muscle, and in about a quarter of an hour he could lay his hand on his head, and in a few days was quite well, without a second operation.

CASE II. An elderly labourer, suffering from rheumatic pain and stiffness of the rectus and other muscles in front of the right thigh, so that he dragged the limb in walking, was enabled to walk without much limping, after the insertion of three needles down the front of the thigh for a period of twenty minutes; and he required no further treatment.

CASE III. An old clergyman, very liable to sciatica, having been advised to try acupuncture, was in the habit of using daily, previous to dressing himself, two or three needles inserted along the course of the nerve, to enable him to walk down stairs with comfort.

CASE IV. A lady of middle age, suffering so much from lumbago and sciatica, that she could not rise from her chair without assistance, after trying hip baths and mustard poultices in vain, was induced to apply the needles to the most painful parts, when, to her astonishment, the pain was much relieved, and after three applications, was entirely removed.

CASE V. A lady advanced in pregnancy, similarly affected to the last case, and who had failed in obtaining relief from baths and mustard plaisters, used a single needle with complete success, but not without considerable disappointment from the extreme pain produced by the operation. This is the only instance of a complaint of the kind I have met with, as, after the immediate pricking sensation during the passage

of the needle through the skin, the feeling is usually like that produced by the strong pressure of the point of the finger on the part.

In none of the above cases was there any constitutional affection, each patient stating that his health was perfect; nor was there any appearance of local inflammation. Indeed my use of acupuncture has always been confined to such cases as the above, as I should not expect that acute rheumatism or neuralgia would be benefited by such means.

In conclusion, I would remark that, though the benefit of acupuncture has been attributed by some writers to a quivering of the affected muscles, which is indicated by a vibratory motion of the needle while inverted, such an appearance has never presented itself in any of my experiments upon myself or others.

Transactions of Branches.

SOUTH-MIDLAND BRANCH.

CONTRIBUTIONS TO THE MEDICAL TOPOGRAPHY OF BEDFORD AND ITS NEIGHBOURHOOD.

By William Blower, Esq., Bedford.

[*Read May 21st.*]

[*Continued from volume for 1857, p. 925.*]

IV. Asiatic Cholera.

Of the three visitations which Asiatic cholera in the epidemic form has made to this country, Bedford suffered severely in the two first, but entirely escaped in the last.

The first epidemic appeared in this town in the autumn of 1832, commencing its ravages on October 4th, and terminating them on November 26th. It broke out on the east side of the place, and passed across it in a westerly direction. The localities which suffered most were Newnham Street and Waterloo, in the parish of St. Cuthbert, Lurke Lane, in the Parish of St. Peter, and houses standing on ground now cleared at the south-east corner of St. Paul's Square, called Vine's Corner; Dane Street, All Hallows Lane, and Haines Street, in the parish of St. Paul. Only two cases occurred on the south side of the river Ouse, and these were in persons who worked during the day in the infected districts on the north side. The number of cases of illness must have been upwards of six hundred; there were about ninety cases of collapse, and thirty-one deaths.

In October 1833, about forty cases of Asiatic cholera occurred at Wootton, a village situated about five miles south-west of Bedford. Its ravages were confined to a part of the parish; no local cause could be assigned for it, and the epidemic was not known to be prevailing in any other place within many miles, either just before, at the time, or soon afterwards, except at Newport Pagnell, a small market town, a few miles off, where it occurred about the same period.

The epidemic, during its second visitation, made its appearance in Bedford in the autumn of 1849. It broke out on the west side of the town, in Gravel Lane—a place where only one case occurred in 1832. Its ravages here were very severe, but were limited almost entirely to two rows of houses joined back to back. It then spread to other parts of the town, and was very violent in a few localities, especially in Westley Row, Pring Street (in which every house was affected), and in Beauchamp Row. In the parish of St. Cuthbert, which suffered so much in the first epidemic, there were only about four cases; and no case occurred on the south side of the river. The deaths registered in the parish of St. Mary, were those of persons who were removed to the Fever Hospital from other parts of the town. One case occurred on the river itself, in a man resident in a barge moored near the bridge. The number of cases of illness could not have been less than one thousand, and the deaths from cholera were thirty-five.

In the third visitation, the epidemic did not invade the town or immediate neighbourhood of Bedford.

In both of the epidemics which visited Bedford, the disease occurred in certain localities, affecting nearly every house within limited spaces, and leaving the surrounding and intervening places comparatively free. A few single cases, certainly, appeared in other and different parts of the town; but some of the persons who suffered had been exposed to the morbific influence in the infected districts, and doubtless contracted the disease there. In other cases, however, no communication with the infected places or infected persons could be discovered, and the disease must have arisen spontaneously. The inhabitants generally suffered from the slighter and concomitant forms of the disease; but it was only in particular spots where its virulence appeared to be concentrated, that it displayed itself in its peculiar malignity.

In the commencement of the epidemic, the disease was much more violent, and ran its course in a shorter period than towards its termination. If began in the majority of cases with diarrhœa. The patients complained of aching of the back and limbs, coldness of the extremities, and a frequent gushing of watery fluid from the bowels without pain or effort; and the expression of the countenance was sunken, and the voice husky. These symptoms increased in intensity, vomiting and cramps supervened, and the stage of collapse set in. In a few cases, however, the attack was quite sudden, the patients, apparently well, suddenly became cold, sick, and faint, and the stage of collapse commenced at once. And in a still fewer number of cases, it began with cramps, at first in the fingers and toes, and gradually extended all over the body without any previous diarrhœa or vomiting. In one case, where the cramps were universal, the action of the heart was increased, instead of being, as in other cases, diminished. The stage of collapse was frequently followed by typhoid fever, and some of the patients after becoming better relapsed once or twice.

In most of the cases the skin was quite dry during the stage of collapse; but in a few instances there was a most profuse perspiration, so that the skin became soddened; and when this condition occurred, the patients sunk with great rapidity. In one case the disease was complicated with congestion of the lungs, and the patient died after a very short illness. In many of the fatal cases, just as reaction was taking place, the patients were attacked by coma or convulsions, and carried off by them. Sometimes the body became warmer just before and immediately after death than it was during the illness, and it continued in this state for a considerable time. Twitching of the muscles also was not uncommon after death, and in a few instances there were extensive movements of the limbs. Thus a woman raised her arm from her side, and placed her fore-arm above her head after she had been laid out, to the great consternation of the by-standers; and a boy drew up his knees after he had been placed in his coffin, when the undertaker was about to fasten down the lid.

The period of incubation did not in general appear to exceed twenty-four hours, as most of the patients, after being exposed to the day time, fell during the next night or following morning. And the exciting cause seemed to be more active in the daytime than during the night; for several men who were only at home at night, being occupied in the respective employments at a distance during the day, escaped until the Sunday night or Monday morning, when they were attacked by the disease after spending the Sunday at home. The disease also was influenced by cold, as the approach of winter always checked its ravages.

During the prevalence of the epidemic, other affections, evidently milder forms of the disease, were very common, and the functions of the digestive organs were generally disturbed throughout the town. Diarrhœa was extremely prevalent. It varied in its character; sometimes the discharges were gruelly, constituting the first stage of Asiatic cholera, at others they were feculent and occasionally mucous or dysenteric. Ordinary English cholera was also of frequent occurrence. Besides these affections other forms of disease were very common. Spasms or cramps were of frequent occurrence, sometimes in the diaphragm and muscles of the chest, sometimes in the abdomen, at others in the extremities, and occasionally over the whole body. In some instances there was pain without contraction situated in different parts of the system, sometimes excruciating, and possessing all the characters of neuralgia. When this pain occurred in the abdomen it constituted gastrodynia or enterodynia, and when in the extremities it was sometimes complicated with stiffness and inability to use the limbs, bearing a resemblance to rheumatism, but without the swelling and tenderness which accompany that disease. The uterine functions were deranged, the catamenia were too profuse, recurred at too short intervals, and were attended with severe pain. There was also a tendency to hæmorrhagic diseases; and head affections, particularly a disposition to torpor, stupor, and coma, were not uncommon. In many of these cases, the bowels were obstinately constipated, and sometimes there was considerable irritability of the stomach, indicated by nausea and sickness.

Asiatic cholera has not only prevailed as an epidemic in this locality, but it has become naturalised, and now occurs sporadically. During the summer and autumn months of almost every year since 1832, but especially in the years 1833, 1834, 1848, 1853, and 1857, cases of disease, totally different from the ordinary cholera of this country, and closely resembling, and not distinguishable from the Asiatic cholera, have occurred, sometimes more and sometimes less numerously, in this town and neighbourhood. These cases may fairly be considered as cases of indigenous and sporadic Asiatic cholera; and perhaps also the single cases which occurred during the prevalence of the epidemics, in places separate and detached from the infected districts, and where no communication could be traced with parts where the epidemic raged, ought to be referred to this form. When the disease occurs sporadically it yields readily to medical treatment, so that nearly all the patients recover; and even the slight mortality which takes place is mainly attributed to delay in obtaining medical assistance, or inattention to the means of cure. In no case where the disease was sporadic did it appear to be communicated by the sick to any other person.

The two first epidemics of Asiatic cholera visited Bedford in its passage up the Ouse. The first epidemic commenced its career at Lynn in the spring of 1832, it travelled slowly up the stream, and finally terminated it course at Olney in the beginning of winter. It first made its appearance in the neighbourhood of Bedford, at Cople, a village situated about four miles to the south-east of the town, and on the south side of the river; next at Renhold, a village lying three miles north-east of the town, and on the north side of the river; it then broke out in the town itself, and afterwards proceeded to places higher up the stream. In its course along the river it attacked some localities and passed by others, acting apparently in a most capricious manner. All the large towns suffered more or less, and some of the villages; but many places, apparently well circumstanced to be affected, altogether escaped. In the second visitation, the epidemic followed nearly the same course, but the localities infected were not so numerous, and it did not extend beyond Bedford. In the third visitation, the progress of the epidemic up the Ouse was averted in the Huntingdon Union; and thus that portion of the county of Bedford, watered by this river, and comprising the Bedford Union, which suffered so much in the two previous visitations, escaped in this one. The county, however, did not go unscathed, as the epidemic passed across the middle portion of it, through the Biggleswade, Ampthill, Woburn, and Leighton Unions, and carried off fifty-four persons in its course.

Dr. Snow's theory of the propagation of cholera is not applicable to its extension along the Ouse, as the disease spread itself up the river, and consequently in a direction contrary to the stream. Neither could it have been conveyed from place to place by the barges, because in the first epidemic it continued its course beyond Bedford, where the river is not navigable. Nor was it brought here by contagion; because in both epidemics it broke out in several houses almost simultaneously, and in persons who had had no communication with each other, or with persons who had suffered from cholera, and no clothing, furniture, or other articles, had been brought from infected places or persons into the houses where the disease first appeared. And the slow progress of the disease, and its pursuing a certain direction, clearly show that it could not have been propagated by the agency of the varying and rapid winds. That it is not communicated by atmospheric influence is also further shown by the occurrence of cases of the disease in great numbers within well defined spaces, distant and distinct from each other, whilst places immediately around and between the plague-stricken plots, were but slightly and often not at all affected. Thus the part of Gravel Lane and Pring Street, which suffered so much, were distant from each other, whilst the intervening space continued nearly free from the disease; and the block of houses where the cholera raged so violently in Gravel Lane was situated between and near to two other rows of houses which escaped, and the west side of Pring Street, which lies between Westley and Beauchamp Rows, remained unaffected by the disease. It is, therefore, evident that the disease must have originated where it appeared, and that it must have been occasioned by some peculiar constitution or condition of the earth itself.

Asiatic cholera could not have been generated by any of the ordinary local causes of disease, as neither over crowding, deficient ventilation, variations of temperature, filth, poverty, or depravity, have ever produced it. These conditions are always present in towns, but the epidemic is of rare occurrence. Besides, at Bedford the disease did not commence or spread amongst the most miserable people, for the greater part of its victims, although they belonged chiefly to the working classes, were tolerably well off. In the first epidemic, the houses where it began were comfortable and convenient, and the occupants respectable; and in the second epidemic, the houses in Gravel Lane, where it commenced, although they were placed back to back, and were without a thorough draught, were raised high above the level of the ground, and were dry and clean, and their inmates were in good circumstances for labourers; whilst other cottages in the same locality, which were low, damp, and dirty, and some of them, too, without back windows or doors, and their inhabitants very poor, entirely escaped. In Westley Row, too, the houses were comfortable and clean, and their occupants were not badly off.

It is also very evident that there must have been some other influence or agency, independent of the presence of the disease itself, to occasion it to spread; because when the sick were removed to places not infected, the disease did not extend itself there. Thus some patients afflicted with the Asiatic cholera were removed to the Fever Hospital, but neither their attendants nor any inmate of the establishment, or of the Infirmary adjoining, were in any way affected by them. A man came from an infected place to Bedford, at a time when cholera was not prevailing there as an epidemic, and fell ill with it in one of the public houses, but no one else suffered from it. A person went from this neighbourhood to London, to visit a son ill with cholera, and found him dead; he attended his funeral and disposed of his effects, and then returned home and was taken with the disease, but none of his attendants or neighbours were attacked by it. And a gentleman on a visit to Bedford died of cholera about a month before it became epidemic, but no other case occurred at that time.

The theory respecting the influence of height on the prevalence of Asiatic cholera did not hold good at Bedford, especially in the first epidemic. The lowest part of the town entirely escaped, whilst some of the higher parts suffered severely; and in the localities where the disease did occur, the number of cases in proportion to the number of inhabitants was as great in the higher as in the lower situations.

In consequence of the great number of cases of illness occurring in various parts of the town, and of the urgency of many of these cases requiring frequent visits and prolonged attendance, together with the speedy interment of the dead, no time could be found for making *post mortem* examinations during the prevalence of the epidemic; but I availed myself of the opportunity of ascertaining the condition of the internal organs, afforded by the case of a man, who, coming from a place where cholera was raging to Bedford, when the town was happily free from it, fell with the disease and died of it after a few hours illness in one of the public houses. The inspection was made shortly after death whilst the body was still quite warm; and the principal facts noticed were the rigidly contracted state of the muscles, the dilated and distended condition of the blood-vessels, and the black and liquid state of the blood. The muscles of the chest and abdomen were very rigid, and the colon was contracted to a mere cord. The arteries in the centre of the body were very large and distended with liquid blood, the aorta being about the size of the wrist, and the mesenteric arteries about the thickness of a finger. The stomach was distended by serum, and the urinary bladder was empty. I could not examine the brain and spinal cord.

From a careful consideration of the symptoms during life, and of the morbid appearances after death, I am of opinion that the pathological conditions upon which cholera depends may be referred to a peculiar condition of the blood, indicated by an acid reaction; to a peculiar state of the vascular system, indicated by paralysis of the heart and arteries; to a peculiar state of the spinal cord, indicated by spasms or cramps; and to a peculiar state of the brain, indicated by coma and convulsions. The combination of these conditions constitutes the disease. They vary in degree, in the order of their occurrence, and in the predominance or absence of one or more of them. With respect to degree, the paralysis of the heart and arteries is the most severe, the affection of the spinal cord is the next, and the affection of the brain, except where opium has been given, is the least violent of these conditions. The usual order of their sequence is: first, the acidity of the blood; next, the paralysis of the vascular system; then, the affection of the spinal cord; and lastly, the affection of the brain. In a few cases, however, the disease commenced with spasms; in one case the blood-vessels were not paralysed, and in some of the most severe cases the spasms were absent. And when one of

these conditions prevailed in excess, it masked the others, and thus occasioned a variation in the symptoms.

The acid condition of the blood accounts for its dark colour, and the dark colour of the blood causes the blueness of the surface. The paralysis of the vascular system occasions the accumulation of blood in the arteries and veins of the central organs of the body, the failure of the pulse at the wrist, the coldness of the surface, the shrunken state of the skin, the aching of the back, the faintness, and the general feeling of distress which characterise Asiatic cholera. The congestion of the abdominal vessels gives rise to the effusion of serum in the intestinal canal, and the accumulation of serum in the stomach and bowels, produces distension of these organs, and the consequent expulsion of their contents by vomiting and purging. The spasms and cramps are produced by the peculiar condition of the spinal cord, and they are no doubt sometimes aggravated by the congestion of this part which accompanies cholera, but they exist independently of it as they occur in cases where the vascular system is not affected. The same obtains also with regard to the brain, as the cerebral derangement is occasionally increased by the congestion of the brain usually present in bad cases; but it is also found in cases where the action of the heart is not disturbed.

In the course of my attendance upon patients affected with Asiatic cholera during the epidemic of 1832, I was particularly struck with the resemblance of the symptoms of that disease to those of poisoning by oxalic acid. Abstracting the symptoms of irritation in the parts to which the poison has been applied, the remainder of the symptoms are those of Asiatic cholera. Thus oxalic acid in large doses occasions paralysis of the heart, indicated by feebleness or failure of the pulse, and coldness and lividity of the surface. In smaller doses, it produces spasms and painful affections; and in still smaller doses, it acts on the brain by causing narcotism. These morbid states are identical with those of Asiatic cholera; and the only difference between the two affections is, that in the one case the exciting cause is applied from without, and in the other it is generated within the body. That oxalic acid may be generated within the body, is a well known pathological fact; and that it is so in an extraordinary degree during the prevalence of Asiatic cholera, is evidenced by a statement of Dr. Elliotson, who, in a clinical lecture delivered in St. Thomas's Hospital, and published in the *Lancet* of July 28th, 1832, relates that Dr. Prout had observed during the existence of the epidemic that the secretions of the human body had become unusually acid, and that the oxalic had supplanted the ordinary acids. This observation has been confirmed by others; and it is also further substantiated by an event which occurred at Bedford in the year 1830, when about fifty persons were poisoned by eating chitterlings which had been bleached by boiling in a solution of oxalic acid. The symptoms were very similar to those of Asiatic cholera; and in the only fatal case, the patient having died comatose, the vessels of the brain, chest, and abdomen, were found to be highly congested with dark fluid blood, as they generally are in that malady. And the presence of oxalic acid in the system will not only account for the symptoms of the disease commonly called cholera, but also of those other forms of illness which accompany the epidemic, and which are clearly modifications or slighter manifestations of the same affection.

It is important to be able to discriminate between Asiatic cholera and other maladies; and the *diagnosis* is not unfrequently attended with considerable difficulty. The epidemic form is distinguishable by its prevalence at distinct periods of time; by its origin in the East, and its slowly progressing round the world in a westerly direction; by the occurrence of great numbers of cases grouped together in scattered and detached localities; and especially by the peculiar characteristics of the disease itself. According to my own observation, the only morbid affection, except cases of poisoning, with which the sporadic form can be confounded, is the common congestive cholera of this country. This disease is of occasional occurrence in the winter from extreme cold, and in the summer from great heat, and in all seasons from inhaling mephitic gases, especially the emanations from cesspools, covered drains, or vaults, in a concentrated state; from drinking large quantities of sour liquids or cold water when very hot, and from eating irritating foods. It is attended by coldness of the surface, cramps of the extremities, feebleness of pulse, weakness of respiration, great thirst, prostration of strength, and the vomiting and purging of a serous or thin gruelly fluid. In 1827, I lost a patient from suppression of urine, after an attack of this disease. When I first saw her, she was in a state of collapse, and had discharged nearly a bucketful of serous fluid She soon recovered from this condition, and became apparently convalescent; but on the third day she was noticed to be drowsy, and on the fourth died comatose, no urine having been secreted after the first seizure. This form of disease may also occur when the other is epidemic, and is then not unlikely to be mistaken for it. A careful attention, however, will generally enable the medical practitioner to distinguish the one from the other. The Asiatic malady mostly comes on without any evident external cause, whilst the English affection can commonly be traced to some distinct and sufficient occasion. In the latter disease, too, the collapse is not so complete, does not last so long, and is not often followed by typhoid fever. Asiatic cholera is a malignant disease, produced by a specific cause; the congestive cholera is a simple disease, arising from an ordinary cause. The collapse, also, of Asiatic cholera is totally different from the exhaustion occasioned by excessive discharges of any kind from the system, as it is not so amenable to stimulants, is not attended by colliquative perspiration, and there is not the same tendency to syncope. And the choleraic vomiting and purging are very characteristic; they are not produced by expulsive efforts, nor are accompanied with pain; and they resemble the gushing forth from or overflowing of overcharged vessels, rather than the retching of ordinary sickness, or the straining of common diarrhœa.

In regard to the *prognosis* of Asiatic cholera, many of the cases terminated fatally where they occurred in groups, whilst the greater part of the single cases recovered. In the commencement of the epidemics, the mortality was the highest, partly, perhaps, from the greater virulence of the morbific agent at this period, but principally from the want of promptness in applying for or in obtaining medical assistance, and also in some measure from the want of experience of the most efficient modes of treatment. As the epidemic advanced, the people became alive to the importance of an early application for attendance, and the profession became more expert in administering remedies. The mortality was consequently much diminished, and numerous cases were prevented from becoming completely developed by promptly arresting the disease at its onset.

With respect to the *treatment* of Asiatic cholera, the result of observations made during three epidemics, and in numerous sporadic cases, has induced me to conclude that the external application of warmth is the first and most important agent to be used. As no time is to be lost this must be attempted by the means at hand; and it is of no consequence how it is accomplished provided the object be promptly effected. The second step is the administration of an emetic; and, as common salt is found in every house, a tablespoonful of this substance, dissolved in a tumbler of hot water, forms the most convenient as well as the most efficient medicine for this purpose. The stomach is generally distended with serum, so that it is useless to put anything else into it until it has been emptied; besides, full and free vomiting is the most powerful stimulant to the action of the heart that we possess. As soon as the stomach has been cleared, I have given chloroform, mixed with chalk or magnesia, in an aromatic water, with great apparent advantage —it seemed to allay the spasms and promote reaction. In children I have found the warm bath most serviceable; but they require to be kept in the water for a long period, sometimes for hours. It has stopped the disease in the stage of collapse without the necessity of giving medicines internally, a most important advantage in this class of patients. The comfort of the sufferers was greatly increased by allowing them to drink freely of cold water, either pure or medicated. Friction with the hand was also urgently called for, and believed by the patients to mitigate the cramps. And mustard or turpentine poultices were also frequently applied, and appeared to be useful, from their stimulant properties. After excitement has taken place, the treatment of course has varied according to the special requirements of every case.

I have given calomel in small, and very frequently repeated, and in large and less often administered doses, but I have great doubts of its efficacy, as, during the stage of collapse, it has appeared to produce no effect, and after reaction has taken place it has sometimes, from the large quantity accumulated in the system, done mischief. In the stage of collapse I have always found opium injurious, so that I have abandoned the use of it in this period of the disease; but I have employed it with great benefit in the subsequent stages, where the patient has suffered from spasmodic or painful affections. Certainly no medicines excited reaction so soon as a combination of calomel and opium; but then, when reaction was produced,

my patients generally became comatose, and most of them died.

When the stomach has continued irritable after reaction has taken place, and has rejected both food and medicine, I have found creasote, in doses of one drop to an ounce of water, frequently administered, very serviceable. And in a case which was succeeded by suppression of urine, two blisters placed on the loins, one on each side of the spine, restored the action of the kidneys, and caused a profuse secretion of urine. The patient recovered, but he complained very much of the annoyance occasioned by the almost incessant and painful micturition, produced by the absorption of the cantharides, and which continued for nearly a day.

In the *prevention* of Asiatic cholera, the only measure that has hitherto appeared to be of any avail is exposure to the vapour of pitch. During the epidemic of 1832, no fresh case occurred in Newnham Street, after large pitch fires had been made in the infected spots, although scavengering, lime washing, and other disinfecting means, had been used previously without any effect. It was also observed in Trinidad, during an epidemic, by Dr. Mitchell, that the inhabitants of one part of the island entirely escaped whilst the disease was extremely destructive in all the other parts. The inhabitants of this favoured spot were extremely poor, and the place itself was very unhealthy. The soil, however, consisted principally of asphalte—the only cause to which the immunity from this disease could be attributed. He also noticed in San Fernando, that the inmates of a house, under and around which a quantity of asphalte had been thrown, escaped, whilst the inhabitants of every house in the vicinity suffered; and that no case occurred in the prison of this city, the cells of which were floored with this substance.

LETTERS AND COMMUNICATIONS.

Letters or communications for the Journal should be addressed to Dr. Wynter, Coleherne Court, Old Brompton, S.W.

Letters regarding the business department of the Journal, and corrected proofs, should be sent to 37, Great Queen Street, Lincoln's Inn Fields, W.C.

British Medical Journal.

SATURDAY, AUGUST 28th, 1858.

LUNATIC ASYLUMS AND THE LUNACY LAWS.

As Mr. Tite will ere long bring before the legislature the whole question of the lunacy laws and lunatic asylums in this country, it would have been wise on the part of the public journals, if they had abstained from prejudging the question; and it would have been but fair, had they held aloof from fostering a bitter prejudice on the part of their readers against any class of persons engaged in the treatment and cure of the insane. The *Times* and other daily papers, however, have taken a different view of their duties as publicists, and have assailed with virulence the proprietors of private lunatic asylums. Day after day, columns of the daily journals are devoted to the silliest abuse of "Mad Doctors", and especially of those who keep private asylums; and gentlemen who have fondly imagined themselves honourably employed in the alleviation of the direst calamity flesh is heir to, suddenly find themselves assailed in leading type as creatures who deliberately make a living out of the "civil murder" of certain of Her Majesty's subjects. The *Times* deliberately asserts that "this is a safe kind of murder —and murders do happen."

Against such an ignorant slander as this, we need not appeal to the experience of those longest versed in the treatment of the insane. That many persons are still retained in asylums after they are to all appearance recovered, is a fact that no one wishes to deny; but we do deny that they are so retained for any other than their own benefit. It is necessary to allow a little margin of time beyond the apparent recovery, in order to test its permanency; and we need not tell our readers that, if the asylum doors were thrown open to patients the moment they became rational, the chances are that they would speedily close upon them again. In this sense, and this sense only, do we believe that there is one mentally sane man to be found in an English private asylum.

The *Times* says, with apparent astonishment, that "It is only to a *madhouse*, and not to a prison, that an Englishman can be sent, and no one be the wiser." Speaking literally, this is a gross falsehood; as no one can be confined in a madhouse without the full knowledge of the proper authorities appointed to take cognisance of these matters. That there is not the same publicity attaching to the committal of an insane person to an asylum as there is of a thief to prison, we admit; but this arises out of the instincts and affections of human nature itself. The very suspicion of a taint of insanity in a family is sufficient to do irreparable social mischief to it: and we may as well demand that the leper shall show his sores in the highways and the byways, as expect that the Englishman will ever submit to a law which should force him to expose, in a public court, the mental sores of those who are nearest and dearest to him whilst they are in their rampant stage. Even if the affections of relatives, and their natural instincts, would permit such a course, justice to the patient himself would forbid it; as there cannot be a doubt that all his symptoms would be thereby aggravated.

The *Times*, in the course of its argument against private asylums, is forced to admit that in some form or other the public will have them; having said so much, however, it directly attempts to draw unfair comparisons between the treatment of the insane in public and in private asylums. In private asylums only, according to the *Times*, the insane are ill treated; and we should be striking at the root of the evil if we could assimilate the management of them to that of the great public asylums. It is quite clear from this expression that the writer never could have heard of the mopping of a poor patient on the bare stones at Bethlehem—or of the prolonged shower bath and strong doses of "white mixture" at the Surrey Asylum. The worst cases of cruelty that have occurred in private asylums have never come up to those examples which have taken place in the largest public asylums in the kingdom.

The *Times* quietly ignores the notorious fact, that the cures in private asylums are beyond all measure more numerous than those in public asylums, and boldly cuts the Gordian knot by saying that the true remedy for the evils at present complained of is the suppression of all *small* private asylums, for the reason that their proprietors must necessarily be needy men. This suggestion is ludicrous enough; but let that pass. The argument of the *Times* is, that in large asylums "the task of supervision would be easier," and that the possession of greater capital would ensure the presence of every comfort and remedy. How the task of supervising a large number of patients could possibly be easier than that of a smaller number, passes our comprehension. At Colney Hatch, and at Hanwell, the medical men do, it is true, supervise with care some eight

hundred patients each a day; but the explanation of this is, that in the true sense of the word it is no supervision at all. The individualities and the idiosyncrasies of each patient must stand but a small chance of being discovered, forming as he does but one amongst a host. The chief advantage of private over public asylums, is the greater chance patients have of being treated individually in the former. Once raise the number of the inmates of the one to those of the other, and you will, of necessity, introduce a system of mere routine, in which classes instead of individuals, with all their wonderful differences of temperament and character, will be treated. *Cæteris paribus*, the smaller the asylum, the higher the chances of the patient's cure. English lunatics like the club system of living no more than the sane; and the nearer the asylum can be made to resemble a "home", the better for its inmates. We contend that in large buildings, inhabited by large numbers, these conditions of home are not obtainable; and to do away with the smaller asylums would therefore be the most absurd step that could be taken. What is wanted to ensure a proper class of medical men fitted for the special care of lunatics, is a system of training, as in our large public asylums. It is a monstrous blot upon medicine, that whilst special examinations have been established for dentists and midwives, the noble study of medical psychology is altogether neglected. Our medical officers, who have the charge of the twenty thousand insane persons at present in asylums, must perforce pick up what knowledge they have previous to entering upon their actual duties from books or from the sparsely given lectures in the public asylums! All this time the splendid facilities of our county asylums are running to waste. If, in future, all persons wishing for a license were to be forced to undergo an examination, and required to give proofs of having attended the practice for a sufficient time of some large public asylum, in our opinion the best guarantee for the proper scientific treatment of the insane would be obtained. As regards the personal qualities of the candidates, they are not to be obtained by any system of examination. Clergymen are not all immaculate, although they are passed through a moral sieve; we cannot, therefore, hope that proprietors of asylums will present a pure white flock without one black sheep among them.

THE WEEK.

In connection with the subject of Poor-Law Medical Reform we are desirous of directing the attention of our associates to the fact, that there are in our list of members six hundred and twenty-seven union medical officers; or nearly one third of the total number of members. But only three hundred and sixty-two of these have as yet joined the ranks of Mr. Griffin's band—the Poor-Law Medical Reform Association. We earnestly entreat those who have not yet sent their names to that gentleman, to do so without delay; and we would beg all our associates, without exception, to aid him according to their power. It is fully expected that Mr. Sotheron-Estcourt, the President of the Poor-Law Board, will issue a draft bill during the present parliamentary recess; and, in order that the medical officers may have a fair opportunity of examining its provisions, and of successfully resisting any influences which may be brought to bear in a manner antagonistic to their interests, it is most important that Mr. Griffin and his colleagues should be at once provided with the means, without which the most important and best designed schemes inevitably fall to the ground.

In the sick chamber, the minister of religion and the medical attendant ought to work hand in hand. They can almost always do this; and we are glad to believe that they do, in the majority of cases, act on this judicious principle. But in recent years there have been creeping into the Church of England doctrines, comment on whose theological bearing is beyond our province, but the carrying out of which leads (and must lead) to conduct most contrary to all precepts of common humanity and sound medical science. In a case which is even now occupying the attention of the daily papers, a reverend gentleman is reported to have called on a poor pregnant woman, ailing and near her confinement, to persuade her to make "auricular confession." Some questions were asked of the woman, as to whether she had broken any of the Ten Commandments. On coming to the seventh, the following dialogue took place:—

Curate.—Did you ever commit adultery?

Woman.—No, sir, I was married too young for that.

Curate.—Yes, but recollect; did you not, before or after you were married, look on a man and lust after him or for him?

This question, the woman said to a lady to whom she was narrating the conversation, "upset her"; for he said, "Now, you are lying there, and hope to be delivered and live; therefore you should confess your sins to me."

Curate.—Have you ever been confirmed?

Woman.—No, sir.

Curate.—Then, remember, if you die you can never enter the kingdom of Heaven; if you live, you must receive the holy sacrament.

Woman.—No, sir, I can't do that; I think that requires a a great deal of preparation.

Curate.—Then you cannot go to Heaven.

And this is the language and the treatment to which the poor, the sick, and the feeble of our land are to be subjected by the would-be "sons of thunder" of an extreme section of the English church. A female, on the eve of confinement, is, however virtuous she may be, to have her womanly feelings insulted by the insinuation of what is in her eye the most degrading of all crimes; and then she is to be told that eternal misery is her doom, unless she follows the injunctions of her reverend adviser! When the medical attendant enters the sick room, and finds a man of true religion there, administering comfort to the patient, the feeling which arises is one of brotherly sympathy—both are working to the same end. But if at any time one of our associates should find at the bedside of a patient a person carrying on an exhortation of the kind we have referred to above, we would counsel our friend the doctor to make no scruple of removing his clerical brother with what speed he may, on the same grounds as he would remove a "peccant humour" or a noisome smell—the safety of his patient. These self-appointed "confessors" would do well to have a care, lest their inquisitorial bearing now and then turn the progress of the patient into an untoward course—perhaps to death.

Reports of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 22nd, 1858.

Sir C. Locock, Bart., M.D., President, in the Chair.

CASE OF DEAF-DUMBNESS OF MORE THAN TWENTY YEARS DURATION: HEARING AND ARTICULATION GREATLY BENEFITED. BY JOSEPH TOYNBEE, ESQ., F.R.S.

In the year 1856, the author laid before the Society the results of some inquiries respecting the deaf and dumb, conducted at the asylum in the Old Kent Road. One of those results was the establishment of the fact that a large number of persons admitted as deaf and dumb nevertheless possess more or less of the power of hearing. Thus, amongst 411 children examined, no less than 166 heard certain sounds. Observation of this fact impressed the author with the desirableness of attempting to cultivate the hearing power in such patients; and the case related was one amongst the most successful.

CALCULUS IN THE BLADDER REMOVED BY LITHOTRITY: COMMUNICATION BETWEEN THE BLADDER AND INTESTINE. BY CHARLES HAWKINS, ESQ.

In February 1855, the patient, a gentleman aged 55, first observed that he passed a substance, about two inches in length, with his urine. He continued to do the like during the whole of that year, but was quite free from it throughout 1856, in the beginning of which year the symptoms of stone set in. He consulted the author on July 14th, 1857, when stone in the bladder was readily detected. Notwithstanding the history of the case, it was determined to have recourse to lithotrity; and the operation, after some few impediments and delays, was completely successful.

DISLOCATION OF THE SHOULDER UPWARDS AND INWARDS: DISSECTION OF THE PARTS INVOLVED. BY T. HOLMES, ESQ.

The patient was admitted into St. George's Hospital, under Mr. Tatum. The accident proved fatal in consequence of other very severe injuries. On examination, the head of the humerus was found immediately under the skin, having passed through the fibres of the deltoid muscle, and having the cephalic vein on its inner side. It had fractured the coracoid process in its passage upwards, and was resting behind on the stump of this process and on the clavicle, with a small portion of the coraco-acromial ligament, which remained untorn: *Internal* to it (besides the fibres of the deltoid and the cephalic vein) was found the fractured extremity of the coracoid process, with the muscles attached to it. *External*, and somewhat posterior to it, was the acromion process, separated from it by some of the fibres of the deltoid. *Below*, and a little external to it, was the glenoid cavity, the tip of which lay on a horizontal plane quite below the level of the dislocated head of the bone. The long tendon of the biceps remained still attached to the scapula, and was therefore situated below and external to the head of the humerus. The bone, in passing out of the glenoid cavity, had injured this tendon slightly, so that some of its internal fibres had been broken away from the muscle. The subscapularis muscle was intact. The muscles attached to the greater tuberosity of the humerus were torn through, except that a portion of the teres minor remained. The capsular ligament had been lacerated at its upper and inner part, forming a large hole for the passage of the head of the humerus.

Editor's Letter Box.

THE MEDICAL ACT.

Sir,—It is written that, when the frogs desired a king, they pestered Jupiter exceedingly. He sent them a log of wood. They were soon dissatisfied with a lumpish piece of inactivity, and petitioned again. He sent them a stork, which strutted about in the water, and began to gobble them up at a great rate.

We are not, perhaps, exactly in the predicament of the frogs in the fable; but, if we be not careful, we shall be nearly so. Parliament, weary of our much importuning for a king, has all of a sudden granted us our plaything. Indeed, after so many slips, the thing has come upon us as suddenly as the laying of the Atlantic cable. And what have we got? The preamble states clearly, "Whereas it is expedient that [the public] should be enabled to distinguish qualified from unqualified practitioners of medicine," etc., etc. After this broad declaration of intention, we have machinery provided for a registration of "qualified practitioners", and so forth. But, with an eye to mischief, clearly, there is a *blank* column appended to the register headed "Titles", without any specimens, as in the other columns. We are, therefore, in the position of the Kilkenny cats, when they were *shut up in a sawpit*—separated, indeed, from the *ignobile vulgus* of the unqualified, but left to fight among ourselves about this miserable question of *titles!* And fight we shall to a certainty, if coming events cast their shadows before, till there will be hardly anything left; and the quacks will look on and pocket the profit. The king sent us will not eat us up; but we are ready enough to eat up one another, if one may judge from the questions and answers in the medical journals, which are already appearing so thickly.

Let us be wiser. No doubt the legislature intends, as indicated in the preamble, that all registered persons should have pretty nearly equal privileges. All general practitioners will, as of *prescriptive right*, style themselves "surgeons", and *recover* for both medical and surgical appliances. Clause xxxii is distinct enough. There is no fear, as the *Lancet* suggests might be the case, that a mere M.R.C.S. or L.M. will style himself "physician". Universal custom and universal ridicule would preclude such a thing. Surely the new Medical Council will be as liberal in their interpretation of the Act as the preamble of it points out. It is *expedient* that qualified should be distinguished from unqualified practitioners; but it is hardly "expedient", surely, that the former should cut one another's throats about this question of titles. No!

"For a' that and a' that,
Our toils obscure and a' that,
The *rank* is but the guinea *stamp*,
The man's the gowd for a' that.

. . . .

Then let us pray, that come it may,
As come it will, for a' that,
That sense and worth o'er a' the earth
May bear the gree for a' that,
For a' that and a' that,
It's coming yet for a' that,
That man to man, the wide world o'er,
Shall *brothers* be for a' that."

I am, etc., M.D.

August 21st, 1858.

LICENTIATES AND EXTRA-LICENTIATES.

Letter from Thomas Laycock, M.D.

Sir,—I observe that, in reply to a correspondent who inquires whether a certain "extra-licentiate of the College of Physicians" at Cambridge is entitled to designate himself a "licentiate", you say "the person referred to has no right to be called other than what he is—an extra-licentiate". Permit me to take exception to your ruling in this matter. The term "extra-licentiate" is an abbreviation of the phrase *extra-urbem licentiate*, as used by the College of Physicians. That, then, is the title he should use, if he be a "licentiate" at all. The College has three classes of physicians on its lists—Socii or Fellows; Permissi or Licentiates *intra urbem;* and Permissi *extra urbem—extra-urbem* Licentiates: these two last being duly qualified to practise *within* London and seven miles thereof, or *without* that charmed circle, as the case may be.

But perhaps it may be new to you to be informed that the so-called extra-licentiates are not, in fact, licentiates or persons *permitted* to practise, but English physicians by statute—persons *admitted* to practise. They hold, therefore, a diploma, and not a license; or the so-called "extra" is, in the words of his diploma, a person "qui admittetur ad praxia medicinæ secundum statuta regni". The College can recall the license of the intra-urbem licentiate; the diploma of the extra is irrevocable. The *intra* is permitted to practise *dum se bene gesserit;* the *extra* is admitted to practise according to the statutes of the realm. I write on the authority of Justice Williams. I am informed that the Royal College of Physicians propose to exclude from their lists all those licentiates who have not a degree of M.D. For years past they have attempted to make the public and the profession believe that they could confer the right to that title; and several gentlemen, of too confiding a nature, have been deluded, to their grief. It will, therefore, be with exquisite consistency that the College takes the step alluded to. I am, etc., T. Laycock, M.D.,

Physician by statute; *vulgo*, "Extra-Licentiate".

Edinburgh, August 23rd, 1858.

SELF-SUPPORTING DISPENSARIES.

Letter from H. L. Smith, Esq.

Sir,—The advertisement which appears in this paper announces that the committee of the Society for the Extension of Dispensaries on the Self-supporting principle throughout the kingdom, are desirous of assisting in establishing provident or self-supporting dispensaries, where there is a reasonable probability of adequate support. A preference will, of course, be given to those places where the population is the most dense, and the greatest number of medical men are willing to co-operate. These institutions are based on the principle of mutual assurance and indemnity, and on the knowledge that the contributions of a large number of persons, though separately small and scarcely worthy of notice, are in the aggregate larger and of more importance than the isolated wealth, however large, of individuals. It is by means of this principle alone, that that large body of the community, which however industrious and worthy, is always poor and unable to pay for good medical attendance, can be saved from death and beggary, or patented quackery. The importance of this principle is also rapidly becoming known to these classes: and the establishment of provident and self-supporting dispensaries has become one of the requirements of the age, and must soon become general throughout the kingdom.

It is therefore necessary that medical men, especially the young, should at once turn their attention to the subject, and carefully and dispassionately consider how far their interest and duties will be affected by them. Believing that the time and real interest of the medical practitioner is inseparable from that of his patients, I have no doubt that it will on examination be found that these institutions advance both the honour and the profit of the profession. They who have no opportunity, under the present arrangements, of earning social distinction, and who have only their character and their skill as their outfit, ought to make themselves acquainted with the best means of making their skill available to the greatest number of their suffering fellow-creatures; to them especially are these institutions likely to be of great service, and to them do the committee look for hearty co-operation.

I am, etc., H. L. Smith.

Southam, August 23rd, 1858.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

** In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

Malan. On August 18th, at Geneva, the wife of H. V. Malan, M.D., of a son.

Remington. On August 19th, at Grove Place, North Brixton, the wife of Thomas Remington, Esq., Surgeon, of twin daughters.

MARRIAGES.

Bird—Adams. Bird, Frederick William, Esq., youngest son of the late Adam Bird, Esq., Surgeon, of West Stockwith, Notts, to Harriet Eliza, daughter of William Adams, Esq., of Datchet, on August 19th.

Forrest—Jenkins. Forrest, John, M.D., C.B., Deputy Inspector-General of Hospitals, to Emma, daughter of the late George H. Jenkins, Esq., at Gibraltar, on August 12th.

Whymper—Beck. *Whymper, George Hughes, Esq., Surgeon, of Walsall, to Ellen, daughter of the late Lancelot Beck, Esq., of Redlands, near Bristol, at Wall Church, near Lichfield, on August 19th.

Wood—Ward. Wood, John, Esq., Surgeon, of Montague Street, Russell Square, and King's College, to Mary Ann, only daughter of William Ward, Esq., of Richmond, at Chiswick, on August 19th.

DEATHS.

Ashwell. On August 23rd, at 5, Upper Wimpole Street, Dora Ellen, third daughter of the late Samuel Ashwell, M.D., aged 23.

Brandreth, J. P., M.D., at Broad Green, near Liverpool, aged 76, on August 18th.

Burrows. On August 21st, while visiting her son, Dr. Burrows, at Upper Sheen, Sophia, widow of the late George Mann Burrows, M.D., aged 90.

Cooper. On August 19th, at New Brentford, Clarence Boyd, youngest child of George Francis Cooper, M.D., aged 17 months.

Palmer. On August 14th, at the residence of his uncle, Dr. Davey, Northwoods, near Bristol, aged 4 years and 11 months, Francis Drake, youngest son of Charles Palmer, M.D., H.E.I.C.S., of Howrah, near Calcutta.

Renton, David William, Esq., late Assistant-Surgeon in the Punjaub, at Bedford, aged 28, on August 18th.

PASS LISTS.

Royal College of Surgeons. Fellows admitted at a meeting of the Council, on Thursday, August 12th:—

Bond, John, Grafton Street, Fitzroy Square: diploma of membership dated April 26th, 1836
Bryan, John Morgan, Northampton: April 29th, 1833
Chadwick, Samuel Taylor, Bolton-le-Moors: April 29, 1831
Hetley, Frederick, Norwood: May 15, 1843
Leach, Richard, Blackburn: May 17th, 1843
Spurrell, Flaxman, Bexley Heath: March 9th, 1838

At the same meeting of the Council—

Inglis, Alexander Monro, Worcester
Rooke, William Forster, Scarborough

Were admitted *ad eundem* members of the College. These gentlemen had previously been admitted Licentiates of the Edinburgh College of Surgeons: their diplomas bearing date respectively June 21st, 1854, and April 23rd, 1855.

University of London. M.B. First Examination. 1858. Examination for Honours.

Anatomy and Physiology.

Gervis, Henry (Exhibition and Gold Medal), St. Thomas's Hospital
Lloyd, Francis (Gold Medal), St. Bartholomew's Hospital
Gibson, Francis Wm., B.A., University College
Bracey, Charles James, Queen's College, Birmingham
Easton, John, King's College } Equal.
Neesom, Joseph, Leeds School of Medicine } Equal.
Evans, George Moule, King's College } Equal.
Moreton, Thomas, St. Thomas's Hospital } Equal.

Chemistry.

Saunders, George J. S. (Exhibition and Gold Medal), King's College
Easton, John (Gold Medal), King's College
Atchley, George Frederick, King's College } Equal.
Neesom, Joseph, Leeds School of Medicine } Equal.
Atwell, Gregory Haines, Guy's Hospital
Gervis, Henry, St. Thomas's Hospital } Equal.
Lloyd, Francis, St. Bartholomew's Hospital } Equal.
Woakes, Edward, St. Thomas's Hospital } Equal.
Woodforde, Alfred, University College } Equal.

Materia Medica and Pharmaceutical Chemistry.

Atchley, George F. (Exhibition and Gold Medal), King's College
Easton, John (Gold Medal), King's College
Gervis, Henry, St. Thomas's Hospital } Equal.
Saunders, George J. Symes, King's College } Equal.
Woakes, Edward, St. Thomas's Hospital
Lloyd, Francis, St. Bartholomew's Hospital
Hellicar, Charles Joseph, Bristol Medical School

Structural and Physiological Botany.

Woodforde, Alfred, University College
Atchley, George Frederick, King's College
Gervis, Henry, St. Thomas's Hospital
Saunders, George J. Symes, King's College

Apothecaries' Hall. Members admitted on Thursday, August 12th, 1858:—

Day, Edwin Edmund, Acton, Middlesex
Gibson, Thomas, Orton, Westmorland
Medd, John, jun., Stockport
Noble, Thomas
Oldman, John, Gainsborough
Phillips, Daniel Weld, Hales Owen, Worcestershire
Williams, John James, Northamptonshire

In addition, six gentlemen passed their first examination.

Thursday, August 19th:—

Morris, William Henry, Studley, Warwickshire
Smithers, Bartholomew Drummond, Brighton

In addition, five gentlemen passed their first examination.

HEALTH OF LONDON:—WEEK ENDING AUGUST 14TH, 1858.

[From the Registrar-General's Report.]

The returns of the metropolitan registrars are still of a satisfactory character. In the week that ended last Saturday (August 21st), the deaths registered were 1112, of which 569 were those of males, and 543 those of females. In the corresponding weeks of 1849 and 1854, when so many lives were destroyed by cholera and diarrhœa, the deaths rose to 2230 in the former year, and to 1833 in the latter. In the corresponding weeks of the ten years 1848-57, the average mortality was 1259. The deaths of last week occurred in an increased population; and the present rate of mortality is therefore comparatively low, being 273 below the corrected average deaths in London. Of the 1112 persons who died, 614 were under 20 years of age; 136 were 20 and under 40; 148 were 40 to 60; 161 were 60 to 80; and 40 were 80 years of age and upwards.

The births registered exceeded the deaths by 446.

The zymotic class of diseases caused 379 deaths, or about one-third of the total mortality, including 22 by measles, 105 by scarlatina, 28 by whooping-cough, 43 by typhus and other continued fevers, 113 by diarrhœa, 10 by cholera, etc. To the constitutional class of diseases 215 deaths were registered: of this number, phthisis or consumption was fatal to 116—96 of whom were between the ages of 20 and 60.

In the local class of diseases, 294 deaths occurred; in the developmental class of diseases, 145 deaths; in violent causes, 54; and in fifteen deaths, the cause was not specified or ill-defined.

Scarlatina (diphtheria) is much above the average. The deaths during the last six weeks were 73, 58, 78, 86, 85, and 105 respectively; last week, with the exception of seven persons, all the deaths from this disease occurred among children under ten years of age. At 25, High Street, St. Giles, the two children of a printer, aged one and two years, died of scarlatina maligna. Mr. Faulkner, the medical attendant, describes this house as inhabited by 33 or 34 persons—18 of whom are children, all more or less bearing traces of illness in their features. For the last two years, there has been no stink-trap in the sink in the basement floor; the tenants of this house have been inhaling the poisonous gases evolved from the sewers, and four persons have died within the last three weeks.

At 9, Kenning's Buildings, Rotherhithe, the son of a labourer, aged two years, died from cholera (twelve hours). Mr. Bayley, the registrar, adds:—"Complaint was made of an obnoxious smell arising from a gully in front of this house, and several persons in its vicinity have been attacked with illness."

Three persons whose deaths were registered attained the advanced age of 90 years and upwards.

Last week the births of 812 boys and 746 girls, in all 1558 children, were registered in London. In the ten corresponding weeks of the years 1848-57 the average number was 1518.

At the Royal Observatory, Greenwich, the mean readings of the barometer in the week was 29·689 in. The daily mean temperature was 63·3°, or 2·2° above the average, but ranged from 83·0° to 47·8°. On Saturday, the thermometer on the grass indicated 32·2°; the highest reading in the sun was 104·6°, on Thursday. The mean dew-point was 53·6°, and the difference between that and the air 9·7°. The wind veered about and changed from south-west to north-west. The sky for the most part was cloudy throughout the week. Rain fell on Tuesday, Wednesday, Thursday; and on Saturday, rain fell generally till evening.

THE MEDICAL COUNCIL.

The following memorial has been addressed to the Secretary of State for the Home Department by the Manchester Medico-Ethical Association:—

To the Right Honourable the Secretary of State for the Home Department.

This memorial of the Manchester Medico-Ethical Association respectfully sheweth—

That under the new Medical Act, 21 and 22 Vict., cap. xc, six members are to be nominated by the Crown to the "General Council".

That each university, college, or licensing body, named in the Act, will send its own representatives to the Council.

That it is highly expedient that surgeons in general practice, having more than one qualification, and constituting a large majority of the medical profession, should be represented in the aforesaid Council.

Your memorialists, therefore, respectfully pray—

That in the nomination of members by the Crown, the interests of the general practitioners in medicine and surgery should be consulted, by the appointment of members of their own grade, either in London or in the provinces.

Signed on behalf of the Manchester Medico-Ethical Association,

Joseph Stone, M.D. } *Honorary*
Jonathan Wilson. } *Secretaries.*

Manchester, August 24th, 1858.

The Military Lunatic Asylum at Chatham. Mr. Gaskin, one of the Commissioners in Lunacy, accompanied by Dr. J. R. Taylor, C.B., principal medical officer at Chatham, and Colonel M. Williams, commanding Royal Engineer, paid a visit to the Military Lunatic Asylum at Fort Pitt, Chatham, on Monday and Tuesday, for the purpose of making an inspection of that establisment. The asylum is built within the fortifications, the site being well chosen. At the present time it is filled with patients, nearly the whole of whom have been sent home insane from India and the colonies. On each day the Commissioner spent several hours in the asylum, and instituted a rigid inspection of every part of the establishment. Several of the arrangements connected with the asylum appear to be faulty, and are required to be immediately remedied. The building itself is not large enough to contain the number of insane soldiers who are at present occupying it with a due regard to their health and personal comfort. The exercise-grounds, too, were found to be exceedingly confined, the patients having but a comparatively very limited space in which to take exercise, while in wet and damp weather they are almost precluded from taking any exercise at all, except under a covered walk or verandah. The Commissioner, during his inspection, made several suggestions to the military authorities, having for their object the comfort of the insane patients. There are scarcely any amusements provided for the patients, and directions were given that they should be allowed to play various games—as billiards, bowls, and other things—to excite their attention and stimulate their activity. The entire establishment was found to be in very good order. The Commissioner during his visit minutely inspected the several wards, sleeping-rooms, bath-rooms, cooking-house, etc., all of which are in a satisfactory state.

TO CORRESPONDENTS.

THOUGHTS, *IN RE* APOTHECARY. DEDICATED TO THE *SINGLE*STICKS OF THE PROFESSION.

To pass, or not to pass, that is the question.
Whether 't were nobler 'gainst the law to practise,
And set the Hall or College at defiance,
Or to grind up for the Apothecaries,
And by thus grinding pass them? To grind—to pass
The Hall—and passing thus, to say we mend
The bother and the thousand natural ills
Physic is heir to—'t is a consummation
Devoutly to be wished. To grind? To pass?
To pass! perchance be plucked:—aye, there's the rub.
For in thus trying to pass, what slips may come
Ere we have shuffled through that dreadful hall
Must give us pause:—there's the respect
That makes th' unqualified so long hang back.
Who 'd be unqualified
And fear to even gather in his bills,
But that the dread of something like being plucked,—
That most unpleasant nuisance, from whose slur
No Doctor e'er recovers,—puzzles the will,
And makes us rather bear those ills we have
Than fly to others that we know not of?
Thus passing doth make cowards of us all,
And thus the doctor's air of resolution
Is sicklied with the dread of getting plucked:
And good intentions of great pith and moment,
With this regard, their currents turn away
And lose the name of action. D.

Communications have been received from:— Dr. Laycock; Mr. A. W. Dumville; Mr. S. Drew; Dr. Lade; Dr. H. Llewellyn Williams; Mr. H. L. Smith: Dr. P. H. Williams; Dr. H. Haynes; Mr. C. Hallett; Dr. W. P. Alison; Dr. Matthews Duncan; Dr. Joseph Stone; Mr. Yearsley; Mr. R. Griffin; Dr. T. Ogier Ward; Professor Miller; Mr. Holmes Coote; Dr. John Watson; Mr. H. G. Trend; Dr. T. Skinner; Mr. F. H. Hartshorne; Mr. William Blower; Mr. T. Holmes; Dr. A. Wood; Dr. J. G. Davey; Mr. G. Whymper; and Mr. T. M. Stone.